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OM nucleic - nucleic search, using sw model

Run on: June 7, 2004, 13:59:55 ; Search time 3212.5 Seconds
(without alignments)
9714.236 Million cell updates/sec

Title: US-10-035-300A-1

Perfect score: 720

Sequence: 1 atggctaccacacacattaa.....tgctgggcgataaagagtaa 720

Scoring table: IDENTITY_NUC

Gapop 10.0 , Gapext 1.0

Searched: 3470272 seqs, 21671516995 residues

Total number of hits satisfying chosen parameters: 6940544

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

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1: gb.ba.*

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3: gb.in.*

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6: gb.pat.*

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Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match	Length	DB	ID	Description
1	716.8	99.6	720	6	AX087917	AX087917 Sequence
2	716.8	99.6	720	6	AX590437	AX590437 Sequence
3	716.8	99.6	720	6	BD187724	BD187724 A method
4	716.8	99.6	1249	1	ECOPNP	MG0917 E. coli puri
5	716.8	99.6	3031	6	BD261823	BD261823 Recombina
6	716.8	99.6	3031	6	AX027820	AX027820 Sequence
7	716.8	99.6	3128	6	BD261824	BD261824 Recombina
8	716.8	99.6	3128	6	AX027821	AX027821 Sequence
9	716.8	99.6	3383	6	BD261814	BD261814 Recombina
10	716.8	99.6	3383	6	AX027811	AX027811 Sequence
11	716.8	99.6	3934	6	BD261825	BD261825 Recombina
12	716.8	99.6	3934	6	AX027822	AX027822 Sequence
13	716.8	99.6	4189	6	BD261816	BD261816 Recombina
14	716.8	99.6	4189	6	AX027813	AX027813 Sequence
15	716.8	99.6	5013	6	AR264513	AR264513 Sequence
16	716.8	99.6	5241	6	BD261818	BD261818 Recombina
17	716.8	99.6	5241	6	AX027815	AX027815 Sequence
18	716.8	99.6	5495	6	BD261815	BD261815 Recombina
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20	716.8	99.6	6046	6	BD261826	BD261826 Recombina
21	716.8	99.6	6046	6	AX027823	AX027823 Sequence
22	716.8	99.6	6269	6	BD261820	BD261820 Recombina
23	716.8	99.6	6269	6	AX027817	AX027817 Sequence
24	716.8	99.6	6299	6	BD261821	BD261821 Recombina
25	716.8	99.6	6299	6	AX027818	AX027818 Sequence
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31	716.8	99.6	338534	1	ECOU93	U14003 Escherichia
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34	705.2	97.9	11599	1	AE005669	AE005669 Escherich
35	699.2	97.1	10335	1	AE015447	AE015447 Shigella
36	699.2	97.1	225944	1	AE016993	AE016993 Escherich
37	688	95.6	86898	1	AE016772	AE016772 Escherich
38	598.4	83.1	21405	1	AE008915	AE008915 Salmonell
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41	558.4	77.6	732	6	AR384902	AR384902 Sequence
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44	480	66.7	214050	1	AJ414142	AJ414142 Yersinia
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ALIGNMENTS

RESULT 1	AX087917	AX087917	720 bp	DNA	linear	PAT 17-MAR-2001
LOCUS	Sequence 3 from Patent WO0114566.					
DEFINITION	AX087917					
ACCESSION	AX087917.1	GI:13396895				
VERSION						
KEYWORDS	Escherichia coli					
SOURCE	Escherichia coli					
ORGANISM	Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;					
REFERENCE	1					
AUTHORS	Tischer, W., Ihlenfeldt, H.G., Barzu, O., Sakamoto, H., Pistotnik, E.,					
TITLE	Marliere, P. and Pochet, S.					
	Enzymatic synthesis of deoxyribonucleosides					


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QY 661 ACCTTCAACGACATGATCAAAATCGCAATCGCAATCGTTCCTGCTGGCGGATAAAGAGTAA 720
Db 661 ACCTTCAACGACATGATCAAAATCGCAATCGCAATCGTTCCTGCTGGCGGATAAAGAGTAA 720

RESULT 3
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LOCUS BD187724 720 bp DNA linear PAT 17-JUL-2003
DEFINITION A method of producing a cytosine nucleoside compound.
ACCESSION BD187724
VERSION BD187724.1 GI:32997463
KEYWORDS JP 2003018997-A/3.
SOURCE Escherichia coli
ORGANISM Escherichia coli
REFERENCE 1 (bases 1 to 720)
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Escherichia.
AUTHORS Araki,T., Ikeda,I., Matoishi,K., Abe,R., Oikawa,T., Matsuba,Y.,
Nagahara,K., Fukui,Y. and Ishibashi,H.
TITLE A method of producing a cytosine nucleoside compound
JOURNAL Patent: JP 2003018997-A 3 21-JAN-2003;
MITSUMI CHEMICALS INC
COMMENT OS Escherichia coli
PN JP 2003018997-A/3
PD 21-JAN-2003
PF 01-MAY-2002 JP 2002129867
PI TADASHI ARAKI, TCHIRO IKEDA, KAORI MATOISHI, REIKO ABE, TOSHIHIRO
PI OIKAWA,
PI YASUKO MATSUBA, KIYOTERU NAGAHARA, YASUSHI FUKUI, HIROKI PI
ISHIBASHI
PC C12N15/09, C12N1/15, C12N1/19, C12N1/21, C12N5/10, C12N9/10 PC
PC C12P19/40, C12N15/00,
PC C12N5/00
CC A method of producing a cytosine nucleoside compound FH key
Location/Qualifiers
FT source 1..720
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Best Local Similarity 99.7%; Pred. No. 6.2e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGGTACCCACACATTAATGCAGAAATGGCGATTTCGCTGAGTAGTTTGTATGCCA 60
Db 1 ATGGTACCCACACATTAATGCAGAAATGGCGATTTCGCTGAGTAGTTTGTATGCCA 60

QY 61 GCGACCCGCTGCGTGCAGATATATCTGAAACTTTCTTGAAGATGCCGTGAAGTG 120
Db 61 GCGACCCGCTGCGTGCAGATATATCTGAAACTTTCTTGAAGATGCCGTGAAGTG 120

QY 121 AACAACTGTCGGGTATGCTGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 180
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QY 181 ATGGGTACCGGTGTTGGTATCCGCTCCCTGCTCCATCTACCAAGAACTGATCCCGAT 240
Db 181 ATGGGTACCGGTGTTGGTATCCGCTCCCTGCTCCATCTACCAAGAACTGATCCCGAT 240

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RESULT 4
ECOPNP 1249 bp DNA linear BCT 26-APR-1993
LOCUS E.coli purine nucleoside phosphorylase (deoD) gene, complete cds.
DEFINITION M60917
ACCESSION M60917
VERSION M60917.1 GI:147308
KEYWORDS purine nucleoside phosphorylase.
SOURCE Escherichia coli
ORGANISM Escherichia coli
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Escherichia.
REFERENCE 1 (bases 1 to 1249)
AUTHORS Hershfield,M.S., Chaffee,S., Koro-Johnson,L., Mary,A., Smith,A.A.
and Short,S.A.
TITLE Use of site-directed mutagenesis to enhance the epitope-shielding
effect of covalent modification of proteins with polyethylene
glycol
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 88 (16), 7185-7189 (1991)
MEDLINE 91334430
PUBMED 1714590
COMMENT Original source text: Escherichia coli (strain K-12) DNA.
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/mol_type="genomic DNA"
/strain="K-12"
/db_xref="taxon:562"
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123..142
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/protein_id="AAA24401.1"
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/translacion="MATPHINAEMGDFADVLMFGDPLRAKVIATFLEADRENNVR
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Query Match 99.6%; Score 716.8; DB 1; Length 1249;
Best Local Similarity 99.7%; Pred. No. 6.4e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGGCTACCCACACATTAATGAGAAATGGGGATTCGCTGACGTAGTTTGTATGCCA 60
DB 123 ATGGCTACCCACACATTAATGAGAAATGGGGATTCGCTGACGTAGTTTGTATGCCA 182

QY 61 GGGGACCCGCTGGGTGCGAAGTATATTGCTGAAACTTTCCTTGAAGATGCCCGTGAAGTG 120
DB 183 GGGGACCCGCTGGGTGCGAAGTATATTGCTGAAACTTTCCTTGAAGATGCCCGTGAAGTG 242

QY 121 AACAAAGTTCGCGGTATGCGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 180
DB 243 AACAAAGTTCGCGGTATGCGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 302

QY 181 ATGGGTACCGGTGCTGATCCCGTCTGCTCCATCTACACCAAGAACTGATCACCGAT 240
DB 303 ATGGGTACCGGTATGCGGTATCCCGTCTGCTCCATCTACACCAAGAACTGATCACCGAT 362

QY 241 TTGGGCTGAAGAAATTAATCCGCTGGGTTCCTTGGCGCAGTTTCGCGCAAGTAAAA 300
DB 363 TTGGGCTGAAGAAATTAATCCGCTGGGTTCCTTGGCGCAGTTTCGCGCAAGTAAAA 422

QY 301 CTGGCGACGTGTTATCGGTATGGGTGCTGACCGAATTCCAAAGTTAACCGCATCCGT 360
DB 423 CTGGCGACGTGTTATCGGTATGGGTGCTGACCGAATTCCAAAGTTAACCGCATCCGT 482

QY 361 TTTAAAGACCATGACTTTGCGGTATCGGTGACTTCGACATGGTTCGCTAACCGAGTAGAT 420
DB 483 TTTAAAGACCATGACTTTGCGGTATCGGTGACTTCGACATGGTTCGCTAACCGAGTAGAT 542

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DB 543 GCAGCTAAAGCACTGGGTATGATGCTCGGTGGGTAAACCTGTTCTCCGTGACCTGTC 602

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QY 601 TGCAACCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGGTGAGCGTCAAGT 660
DB 723 TGCAACCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGGTGAGCGTCAAGT 782

QY 661 ACCTTCAACGACATGATCAAAATCGCAATCCGTTCTGCTGGGCGATAAAGAGTAA 720
DB 783 ACCTTCAACGACATGATCAAAATCGCAATCCGTTCTGCTGGGCGATAAAGAGTAA 842

RESULT 5

BD261823 3031 bp DNA linear PAT 17-JUL-2003
LOCUS
DEFINITION Recombinant bacterial strains for the production of natural nucleosides and modified analogues thereof.
ACCESSION BD261823
VERSION BD261823.1 GI:33071591
KEYWORDS JP 2002533126-A/12.
SOURCE synthetic construct
ORGANISM
REFERENCE 1 (bases 1 to 3031)
AUTHORS Bestetti, G., Cali, S., Ghisetti, D., Orsini, G., Tonon, G. and Zuffi, G.
TITLE Recombinant bacterial strains for the production of natural nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 12 08-OCI-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence

PN JP 2002533126-A/12.
PD 08-OCT-2002
PR 23-DEC-1999 JP 20005911198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: udp and deod cloned into CC
pMW46

CC without upstream ptac promoter
FH Key Location/Qualifiers
FT source 1..3031
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/organism="synthetic construct"
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FEATURES
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ORIGIN

Query Match 99.6%; Score 716.8; DB 6; Length 3031;
Best Local Similarity 99.7%; Pred. No. 6.9e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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QY 61 GGGGACCCGCTGGGTGCGAAGTATATTGCTGAAACTTTCCTTGAAGATGCCCGTGAAGTG 120
DB 161 GGGGACCCGCTGGGTGCGAAGTATATTGCTGAAACTTTCCTTGAAGATGCCCGTGAAGTG 220

QY 121 AACAAAGTTCGCGGTATGCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 180
DB 221 AACAAAGTTCGCGGTATGCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 280

QY 181 ATGGGTACCGGTGTTGTTATCCCGTCTGCTGCTTACACCAAGAACTGATCACCGAT 240
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DB 341 TTGGGCTGAAGAAATTAATCCCGGTGGGTTCCTTGGCGGAGTTCGCGCAGTAAAA 400

QY 301 CTGGCGACGTGCTTATCGGTATGGGTGCTGACCGATTCCAAAGTTAACCGCATCCGT 360
DB 401 CTGGCGACGTGCTTATCGGTATGGGTGCTGACCGATTCCAAAGTTAACCGCATCCGT 460

QY 361 TTTAAAGACCATGACTTTGCGGTATCGGTGCTGACCTTTCGACATGGTTCGCTAACCGAGTAGAT 420
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QY 421 GCAGCTAAAGCACTGGGTATGATGCTGGGTGAGTAACTGTTCTCGGTGACCTGTTTC 480
DB 521 GCAGCTAAAGCACTGGGTATGATGCTGGGTGAGTAACTGTTCTCGGTGACCTGTTTC 580

QY 481 TACTCTCGGACGGCGAAATGTTGAGCTGATGAGAAATACGGCATTCGCGGTGGAA 540
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DB 701 TGCACCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGGTGAGCGTCAAGT 760

QY 661 ACCTTCAACGACATGATCAAAATCGCAATCCGTTCTGCTGGGCGATAAAGAGTAA 720
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RESULT 6
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LOCUS          3031 bp      DNA      linear      PAT 16-SEP-2000
DEFINITION    Sequence 12 from Patent WO0039307.
ACCESSION     AX027820
VERSION       AX027820.1 GI:10188664
SOURCE        synthetic construct
ORGANISM      artificial sequences.
REFERENCE     1
AUTHORS       Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE         Recombinant bacterial strains for the production of natural
              nucleosides and modified analogues thereof
JOURNAL       Patent: WO 0039307-A 12 06-JUL-2000;
              BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
              ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
              GHISOTTI DANIELA (IT)
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Query Match          99.6%; Score 716.8; DB 6; Length 3031;
Best Local Similarity 99.7%; Pred. No. 6.9e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
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DB 101 ATGGCTACCCACACATTAAATGAGAAATGGCGATTCCTGCTGACGTAGTTTGATGCCA 160
QY 61 GCGGACCGCTCGGCGGAGTATATTGCTGAACTTTCCTTGAAGATCCCGTGGAAGTG 120
DB 161 GCGGACCGCTCGGCGGAGTATATTGCTGAACTTTCCTTGAAGATCCCGTGGAAGTG 220
QY 121 AACACAGTTTCGGGTATGCTGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 180
DB 221 AACACAGTTTCGGGTATGCTGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 280
QY 181 ATGGGTACGGTGTGGTATCCGTCCTGCTCATCTACACAAAGAACTGATCAACCGAT 240
DB 281 ATGGGTACGGTGTGGTATCCGTCCTGCTCATCTACACAAAGAACTGATCAACCGAT 340
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DB 341 TTCCGGGTGAAGAAATTTATCCGCTGGGTTCCTGTGGCGGAGTTCTGCCGCAAGTAA 400
QY 301 CTGCGCGAGCTGCTTATCCGTATGGGTGCTGCGACCGATTCCAAAGTTAAACCGCATCCGT 360
DB 401 CTGCGCGAGCTGCTTATCCGTATGGGTGCTGCGACCGATTCCAAAGTTAAACCGCATCCGT 460
QY 361 TTTAAGACCATGACTTTGCCGCTATCGCTGACTTCGACATGCTGCGTAACCGAGTAGAT 420
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QY 421 GCAGCTAAGCACTGGGTATTGATGCTCCGCTGGGTAACTGTTCTCCGCTGACCTGTTTC 480
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QY 601 TGCACCGTATCTGACCATCTCCGACTACGAGGACACCATGCGCGCTGAGCGTCAAGCT 660
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DB 701 TGACCGGTATCTGACACATCCGACTCACGAGACACCATGCGCTGAGCGTCAAGCT 760
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LOCUS          3128 bp      DNA      linear      PAT 17-JUL-2003
DEFINITION    Recombinant bacterial strains for the production of natural
              nucleosides and modified analogues thereof.
ACCESSION     BD261824
VERSION       BD261824.1 GI:33071592
KEYWORDS      JP 2002533126-A/13.
SOURCE        synthetic construct
ORGANISM      synthetic construct
              artificial sequences.
REFERENCE     1 (bases 1 to 3128)
AUTHORS       Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE         Recombinant bacterial strains for the production of natural
              nucleosides and modified analogues thereof
JOURNAL       Patent: JP 2002533126-A 13 08-OCT-2002;
              NORPHARMA SPA
COMMENT       OS Artificial Sequence
              PN JP 2002533126-A/13
              PD 08-OCT-2002
              PF 23-DEC-1999 JP 2000591198
              PR 23-DEC-1998 IT MI 98A002792
              PI GIUSEPPINA BESTETTI,SIMONA CALI,DANIELA GHISOTTI,GAETANO PI
              ORSINI,
              PI GIANCARLO TONON,GABRIELE ZUFFI
              PC C12N15/09,C12N1/21,C12N9/10//C12P19/38,C12P19/40,C12N15/00 CC
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ORIGIN
Query Match          99.6%; Score 716.8; DB 6; Length 3128;
Best Local Similarity 99.7%; Pred. No. 6.9e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
QY 1 ATGGGTACCCACACATTAAATGAGAAATGGCGATTCCTGCTGACGTAGTTTGATGCCA 60
DB 198 ATGGGTACCCACACATTAAATGAGAAATGGCGATTCCTGCTGACGTAGTTTGATGCCA 257
QY 61 GCGGACCGCTCGGCGGAGTATATTGCTGAACTTTCCTTGAAGATCCCGTGGAAGTG 120
DB 258 GCGGACCGCTCGGCGGAGTATATTGCTGAACTTTCCTTGAAGATCCCGTGGAAGTG 317
QY 121 AACACAGTTTCGGGTATGCTGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 180
DB 318 AACACAGTTTCGGGTATGCTGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 377
QY 181 ATGGGTACCGGTGTTGGTATCCCGTCTGCTCATCTACCAAGAACTGATCAACCGAT 240
DB 378 ATGGGTACCGGTATGGGTATCCCGTCTGCTCATCTACCAAGAACTGATCAACCGAT 437
QY 241 TTCCGGGTGAAGAAATTTATCCGCTGGGTTCCTGTGGCGAGTTCCTGCCGCAAGTAAA 300
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Db 798 TGACCCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGGTGAGCGTTCAGACT 857
QY 661 ACCTTCAACGACATGATCAAAATCGCACTGCAATTCGCGGTGAGCGTTCAGACT 720
Db 858 ACCTTCAACGACATGATCAAAATCGCACTGCAATTCGCGGTGAGCGTTCAGACT 917

RESULT 8
AX027821
LOCUS 3128 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 13 from Patent WO0039307.
ACCESSION AX027821
VERSION AX027821.1 GI:10188665
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1
AUTHORS Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: WO 0039307-A 13 06-JUL-2000;
BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);
ORSINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
GHISOTTI DANIELA (IT)
FEATURES
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/mol_type="unassigned DNA"
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/note="deod cloned downstream ptac promoter"
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Query Match 99.6%; Score 716.8; DB 6; Length 3128;
Best Local Similarity 99.7%; Pred. No. 6.9e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGGCTACCCACACATTAATGAGAAATGGCGGATTCGCTGACGTAGTTTCATGCCA 60
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Db 258 GCGGACCCGCTGCGTGCAGATTAATGCTGAAACTTTCCTTGAAGATGCCCGTGAAGTG 317
QY 121 AACACGTTCCGGTATGCTGGGTTCACCGGTACTTACAAAGCGCGCAAAATTCGGTA 180
Db 318 AACACGTTCCGGTATGCTGGGTTCACCGGTACTTACAAAGCGCGCAAAATTCGGTA 377
QY 181 ATGGGTACCGGTGTTGGTATCCGTCCTGCTCCATCTACACCAAGAACTCATCCGAT 240
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QY 481 TACTCTCCGACGCGGAAATGTTTCGACGTGATGAAAAATACGGCAATTCCTCGGCGTGGAA 540
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Db 738 ATGGAAGCGGTGATCTACGGGTGCTGCGGTGCGGTAAACCTGTTTCGCGGTAAACCTGTTTC 797
QY 601 TGACCCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGGTGAGCGTTCAGACT 660
Db 798 TGACCCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGGTGAGCGTTCAGACT 857
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RESULT 9
BD261814
LOCUS 3383 bp DNA linear PAT 17-JUL-2003
DEFINITION Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
ACCESSION BD261814
VERSION BD261814.1 GI:33071582
KEYWORDS JP 2002533126-A/3.
SOURCE synthetic construct
ORGANISM synthetic construct
REFERENCE 1 (bases 1 to 3383)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 3 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
PN JP 2002533126-A/3
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI,SIMONA CALI,DANIELA GHISOTTI,GAETANO PI
ORSINI,
PI GIANCARLO TONON,GABRIELE ZUFFI
PC C12N15/09 C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: Plasmid
CC deob
FH Key Location/Qualifiers
FT gene Location/Qualifiers
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/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
ORIGIN
Query Match 99.6%; Score 716.8; DB 6; Length 3383;
Best Local Similarity 99.7%; Pred. No. 6.9e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
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Qy	121	AACAACGTTTCGCGGTATGCTGGGCTTACCGGTTACTTAACAAGGCGCGAAAATTTCCGTA	180
Db	360	AACAACGTTTCGCGGTATGCTGGGCTTACCGGTTACTTAACAAGGCGCGAAAATTTCCGTA	419
Qy	181	ATGGGTCAACGGTGTGGTATCCCGTCTGTCCTCATCTACACCAAGAACTCATCACCGAT	240
Db	420	ATGGGTCAACGGTGTGGTATCCCGTCTGTCCTCATCTACACCAAGAACTCATCACCGAT	479
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Db	480	TTCCGGCGTGAAGAAAAATTAATCCGGTGGGTTTCCTGTGGCGAGTTCTCCGCGACGTAAAA	539
Qy	301	CTCGCGACGTCGTTATCGGTATGGGTGCTGCACCGATTCCAAAGTTAAACCGATCCGT	360
Db	540	CTCGCGACGTCGTTATCGGTATGGGTGCTGCACCGATTCCAAAGTTAAACCGATCCGT	599
Qy	361	TTTAAAGACCATGACTTTTGGCGCTATCGCTGACTTCGACATGTCGCGTAAACGCGATAGAT	420
Db	600	TTTAAAGACCATGACTTTTGGCGCTATCGCTGACTTCGACATGTCGCGTAAACGCGATAGAT	659
Qy	421	GCAGCTAAAGCACTGGGTATTGATGCTCGGTGGGTAACTTGTTCTCGCTGACCTGTTTC	480
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Qy	481	TACTCTCCGACGGCGAAATGTTTCGACCTGATGGAAAAATACGGCATTTCTCGGCGTGAA	540
Db	720	TACTCTCCGACGGCGAAATGTTTCGACCTGATGGAAAAATACGGCATTTCTCGGCGTGAA	779
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Db	780	ATGGAAGCGCTGGTATCTACGGGTCGCTCGAAGTTTGGCGGAAAGCCCTGACCATC	839
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Db	840	TGCACCGTATCTGACCATCCGCATCAGCAGACACCTGCGCGTACGGGTGAGACT	899
Qy	661	ACCTTCAACGACATGATCAAAATCGCATGGAAATCCGTTCTGCTGGGCGGATAAAGAGTAA	720
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ORIGIN	Query Match	99.6%; Score 716.8; DB 6; Length 3383;
	Best Local Similarity 99.7%; Pred. No. 6.9e-182;	
	Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;	
Qy	1	ATGGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTTCATGCCA 60
Db	240	ATGGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTTCATGCCA 299
Qy	61	GGGACCCGCTGCGTGCAGATATATGCTGAAACTTTCCTTGAAGATGCCGTTGAAGTG 120
Db	300	GGGACCCGCTGCGTGCAGATATATGCTGAAACTTTCCTTGAAGATGCCGTTGAAGTG 359
Qy	121	AACAAAGTTTCGCGGTATGCTGGGCTTCAACCGTACTTACAAAGCCCGCAAAATTTCCGTA 180
Db	360	AACAAAGTTTCGCGGTATGCTGGGCTTCAACCGTACTTACAAAGCCCGCAAAATTTCCGTA 419
Qy	181	ATGGGTACCGTGTGTGTATCCGTCCTGCTCCATCTACACCAAGAACTGATCACCGAT 240
Db	420	ATGGGTACCGTGTGTGTATCCGTCCTGCTCCATCTACACCAAGAACTGATCACCGAT 479
Qy	241	TTGGCGGTGAAGAAAATTTATCCGGTGGGTTTCCTGTGGCGGAGTTCTGCGCAGTAAA 300
Db	480	TTGGCGGTGAAGAAAATTTATCCGGTGGGTTTCCTGTGGCGGAGTTCTGCGCAGTAAA 539
Qy	301	CTGGCGACGTCGTTATCGGTATGGGTGCTGTGACCGGATTCCTGCGGATTAACCGCATCCGT 360
Db	540	CTGGCGACGTCGTTATCGGTATGGGTGCTGTGACCGGATTCCTGCGGATTAACCGCATCCGT 599
Qy	361	TTTAAAGACCATGACTTTGGCGGTATCGCTGACTTCGACATGGTGTGCGTAAACGCAAGT 420
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Db	660	GCAGCTAAAGCAGCTGGTATTGATGCTCGGTGGGTAACTGTTCTCGGTGACCTGTTTC 719
Qy	481	TACTCTCCGACGGCGAAATGTTTCGACGTGATGAAAAATACGGCATTCGCGGCTGGAA 540
Db	720	TACTCTCCGACGGCGAAATGTTTCGACGTGATGAAAAATACGGCATTCGCGGCTGGAA 779
Qy	541	ATGAAAGCGGTGATGATCTACGGCGTCTGTCAGAAATTTGGCGGCGAAAGCCCTGACCATC 600
Db	780	ATGAAAGCGGTGATGATCTACGGCGTCTGTCAGAAATTTGGCGGCGAAAGCCCTGACCATC 839
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Db	840	TGCACCGTATCTGACCACTACCGCACTACAGACAGACCACTGCGGTGACGGTCAGACT 899
Qy	661	ACCTTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGGCGATAAAGAGTAA 720
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LOCUS	3934 bp	DNA linear PAT 17-JUL-2003
DEFINITION	Recombinant bacterial strains for the production of natural nucleosides and modified analogues thereof.	
ACCESSION	BD261825	
VERSION	BD261825.1	GI:33071593
KEYWORDS	JP 200253126-A/14.	
SOURCE	synthetic construct	
ORGANISM	synthetic construct	
REFERENCE	1 (bases 1 to 3934)	
AUTHORS	Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tononi,G. and Zuffi,G.	
TITLE	Recombinant bacterial strains for the production of natural nucleosides and modified analogues thereof	
JOURNAL	Patent: JP 200253126-A 14 08-OCT-2002;	
COMMENT	NORPHARMA SPA	
	OS Artificial Sequence	


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RESULT 13
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LOCUS 4189 bp DNA linear PAT 17-JUL-2003
DEFINITION Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
ACCESSION BD261816
VERSION JP 2002533126-A/5.
KEYWORDS synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1 (bases 1 to 4189)
AUTHORS Bestetti, G., Cali, S., Ghisotti, D., Orsini, G., Tonon, G. and Zuffi, G.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 5 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
PN JP 2002533126-A/5
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PI 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
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FT gene (1037). (1766).
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Query Match 99.6%; Score 716.8; DB 6; Length 4189;
Best Local Similarity 99.7%; Pred. No. 7e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
Qy 1 ATGGCTACCCACACATTAAATGCGAATGGCGGATTCGCTGACGTAGTTTGTATGCCA 60
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Db 1646 TGCACCGTATCTGACCATCGCACTCAGCAGACACACCTGCCGCTGAGCGTCAGACT 1705
Qy 661 ACCTTCAACGACATGATCAAAATCCGACTTGAATCCGTTCTGCTGGCGGATAAAGAGTAA 720
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RESULT 14
AX027813 4189 bp DNA linear PAT 16-SEP-2000
LOCUS 4189 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 5 from Patent WO0039307.
ACCESSION AX027813
VERSION AX027813.1 GI:10188657
KEYWORDS synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1
AUTHORS Bestetti, G., Cali, S., Orsini, G., Tonon, G., Zuffi, G. and Ghisotti, D.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: WO 0039307-A 5 06-JUL-2000;
BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
GHISOTTI DANIELA (IT)
FEATURES
source Location/Qualifiers
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ORIGIN
Query Match 99.6%; Score 716.8; DB 6; Length 4189;
Best Local Similarity 99.7%; Pred. No. 7e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
Qy 1 ATGGCTACCCACACATTAAATGCGAATGGCGGATTCGCTGACGTAGTTTGTATGCCA 60
Db 1046 ATGGCTACCCACACATTAAATGCGAATGGCGGATTCGCTGACGTAGTTTGTATGCCA 1105
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Db 1106 GCGGACCGCTGCGGGAAGTATATGCTGAACTTCTTGAAGTCCCGTGAAGTG 1165
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DEFINITION Sequence 5 from patent US 6491905.
ACCESSION AR264513
VERSION AR264513.1 GI:29692752
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE
1 (bases 1 to 5013)
AUTHORS Sorscher,E.J., Parker,W.B., Waud,W., Gadi,V.K. and Bennett,L.I. Jr.
TITLE Recombinant bacterial cells for delivery of ENP to tumor cells
JOURNAL Patent: US 6491905-A 5 10-DEC-2002;
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ORIGIN
Query Match 99.8%; Score 716.8; DB 6; Length 5013;
Best Local Similarity 99.7%; Pred. No. 7.1e-182;
Matches 718; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
Qy 1 ATGGCTACCCACACATTAATGAGAAATGGGGGATTTTCGCTGACGATGTTTGTATGCCA 60
Db 413 ATGGCTACCCACACATTAATGAGAAATGGGGGATTTTCGCTGACGATGTTTGTATGCCA 472
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Job time : 3217.5 secs

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Qy 361 TTTTAAAGACCATGACTTTTCCCGCTATCGCTGACCTCGACATGTCGATGTCGATGAT 420
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GenCore version 5.1.6
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OM protein - nucleic search, using frame_plus_p2n model

Run on: June 8, 2004, 03:05:11 ; Search time 2814 Seconds
(without alignments)
3681.231 Million cell updates/sec

Title: US-10-035-300A-2
Perfect score: 1225

Sequence: 1 MATPHINAEMGDFADVMP.....TTFNDMIKIALESVLLGDKE 239

Scoring table: BLOSUM62
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Ygapop 10.0 , Ygapext 0.5
Fgapop 6.0 , Fgapext 7.0
Delop 6.0 , Delext 7.0

Searched: 3470272 seqs, 21671516995 residues

Total number of hits satisfying chosen parameters: 6940544

Minimum DB seq length: 0

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Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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2	1222	99.8	720	6	AX590437 Sequence
3	1222	99.8	720	6	BD187724 A method
4	1222	99.8	1249	1	M60917 E.coli puri
5	1222	99.8	3031	6	BD261823 Recombina
6	1222	99.8	3031	6	AX027820 Sequence
7	1222	99.8	3128	6	BD261824 Recombina
8	1222	99.8	3128	6	AX027821 Sequence
9	1222	99.8	3383	6	BD261814 Recombina
10	1222	99.8	3383	6	AX027811 Sequence
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25	1222	99.8	6299	6	AX027818 Sequence
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ALIGNMENTS

RESULT 1

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LOCUS AX087917 720 bp DNA linear PAT 17-MAR-2001
DEFINITION Sequence 3 from Patent WO0114566.
ACCESSION AX087917
VERSION AX087917.1 GI:13396895
KEYWORDS Escherichia coli
SOURCE Escherichia coli
ORGANISM Escherichia coli
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Escherichia.
REFERENCE
AUTHORS Tischer,W., Ihlenfeldt,H.G., Barzu,O., Sakamoto,H., Pistotnik,E.,
Marliere,P. and Pochet,S.
TITLE Enzymatic synthesis of deoxyribonucleosides
JOURNAL Patent: WO 0114566-A 3 01-MAR-2001.
Roche Diagnostics GmbH (DE) ; INSTITUT PASTEUR (FR) ; Pharma-
Walldhof GmbH & Co. KG (DE)
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Pred. No.: 2,21e-110 Length: 720
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
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Db 661 ACCTTCAACGACATGATCAAAATCGCACTGGATCCGTTCTGCTGGCGATAAAGAG 717
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LOCUS AX590437 720 bp DNA linear PAT 27-JAN-2003
DEFINITION Sequence 3 from Patent EP1254959.
ACCESSION AX590437
VERSION AX590437.1 GI:27949070
KEYWORDS Escherichia coli
SOURCE Escherichia coli
ORGANISM Escherichia coli
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Escherichia.
REFERENCE
AUTHORS Araki,T., Ikeda,I., Matoishi,K., Abe,R., Oikawa,T., Matsuba,Y.,
Ishibashi,H., Nagahara,K. and Fukui,Y.
TITLE Method for producing cytosine nucleoside compounds
JOURNAL Patent: EP 1254959-A 3 06-NOV-2002;
MITSUI CHEMICALS, INC. (JP)
FEATURES
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Pred. No.: 2,21e-110 Length: 720
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
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 LOCUS A method of producing a cytosine nucleoside compound.
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 ACCESSION BD187724.1 GI:32997463
 VERSION JP 2003018997-A/3.
 KEYWORDS Escherichia coli
 SOURCE Escherichia coli
 ORGANISM Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Escherichia.
 REFERENCE 1 (bases 1 to 720)
 AUTHORS Araki,T., Ikeda,I., Matoishi,K., Abe,R., Oikawa,T., Matsuba,Y., Nagahara,K., Fukui,Y. and Ishibashi,H.
 TITLE A method of producing a cytosine nucleoside compound
 JOURNAL Patent: JP 2003018997-A.3 21-JAN-2003;
 MITSUI CHEMICALS INC
 COMMENT OS Escherichia coli
 PN JP 2003018997-A/3
 PD 21-JAN-2003
 PF 01-MAY-2002 JP 2002129867
 PI TADASHI ARAKI,ICHIRO IKEDA,KAORI MATOISHI,REIKO ABE,TOSHIHIRO
 PI OIKAWA,
 PI YASUKO MATSUBA,KIYOTERU NAGAHARA,YASUSHI FUKUIRI,HIROKI
 ISHIBASHI
 PC C12N15/09,C12N1/15,C12N1/19,C12N1/21,C12N5/10,C12N9/10 PC
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 CC A method of producing a cytosine nucleoside compound FH Key
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 FT /organism='Escherichia coli'.
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 Score: 100.00% Conservative: 1
 Percent Similarity:

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 DEFINITION
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 VERSION M60917.1 GI:147308
 KEYWORDS purine nucleoside phosphorylase.
 SOURCE Escherichia coli
 ORGANISM Escherichia coli
 Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Escherichia.
 REFERENCE 1 (bases 1 to 1249)
 AUTHORS Hersfield,M.S., Chaffee,S., Koro-Johnson,L., Mary,A., Smith,A.A. and Short,S.A.
 TITLE Use of site-directed mutagenesis to enhance the epitope-shielding effect of covalent modification of proteins with polyethylene glycol
 JOURNAL Proc. Natl. Acad. Sci. U.S.A. 88 (16), 7185-7189 (1991)
 MEDLINE 91334430

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DB: 1 Gaps: 0

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QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
Db 243 AACAGTTTCGCGGTATGCTGGGCTTCACCGTACTTACAGGCCGCAAAATTTCCGTA 302
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
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RESULT 5
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LOCUS Recombinant bacterial strains for the production of natural
DEFINITION nucleosides and modified analogues thereof.
ACCESSION BD261823
VERSION BD261823.1 GI:33071591
KEYWORDS JP 2002533126-A/12.
SOURCE synthetic construct
ORGANISM synthetic construct
REFERENCE 1 (bases 1 to 3031)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 12 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
PN JP 2002533126-A/12
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
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ORIGIN
Alignment Scores:
Pred. No.: 1,38e-109 Length: 3031
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0

US-10-035-300A-2 (1-239) x BD261823 (1-3031)

QY 1 MetAlaThProHisIleAsnAlaGluMetGlyAspPheAlaAspValValleuMetPro 20
Db 101 ATGGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTGTATGCCA 160
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
Db 161 GCGACCCCGCTCGTGCAGAAATATATGCTGAACACTTTCCTTGAAGATGCCCGTGAAGTG 220

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QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 221 AACACGTTTCGGGTATGCTGGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 280

QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGlyLeuIleThrAsp 80
DB 281 ATGGGTACCGGTATGGGTATCCGCTCTGCTCATCTACCAAGAACTGATCACCGAT 340

QY 81 PheGlyValLysIleLeuArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 341 TTCGGCGTGAAGAAATATTCGGCGGTTCCTGTGGCGCAGTTCTGCGCGACGTAAAA 400

QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 401 CTGCGCGACGTCGTTATCGGTATGGGTGCTCGCGGTACCGGATTCCAAAGTTAAACCGCATCCGT 460

QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 461 TTTAAAGACCATGACTTTGCGCGTATCGCTGACTTCGACATCGTGGTAAACGACGTAGAT 520

QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
DB 521 GCAGTAAAGCACCTGGGTATTCGCTGCGGTGGTAAACCTGTTCTCCGCTGACCTGTTTC 580

QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 581 TACTCTCCGACCGCGCAATGTTGACGCTGATGGGTAAGAAATACGGCATTTCTCGCGGTGAAA 640

QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyValAlaLysAlaLeuThrIle 200
DB 641 ATGGAAGCGGTGGTATCTACGGCTGCTGAGAAATTTGGCGCGAAAGCCCTGACCATC 700

QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
DB 701 TGCACCGTATCTGACCATCCGACTCAGCAGACACCTGCGCGCTGACGCTCAGACT 760

QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuGlyAspLysGlu 239
DB 761 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGCGGATAAAGAG 817

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RESULT 6
AX027820 3031 bp DNA linear PAT 16-SEP-2000
LOCUS
DEFINITION Sequence 12 from Patent WO0039307.
ACCESSION AX027820
VERSION AX027820.1 GI:10188664
KEYWORDS
SOURCE synthetic construct
ORGANISM artificial sequences.

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REFERENCE 1
AUTHORS Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);
ORSINI GIACINTO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
GHISOTTI DANIELA (IT)

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FEATURES
source
location/Qualifiers
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/organism="synthetic construct"
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/note="udp and deod cloned into pGM746 without upstream
ptac promoter"

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ORIGIN
Alignment Scores:
Pred. No.: 1.38e-109 Length: 3031
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0

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DB: 6 Gaps: 0
US-10-035-300A-2 (1-239) x AX027820 (1-3031)

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DB 101 ATGGGTACCCCAACACATTAATGCAGAAATGGCGGATTTTCGCTGAGCTAGTTTGTATGCCA 160

QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 161 GCGGACCGCTGCGTGGCAAGTATATTGCTGAAATCTTCTTGAAGATGCCCGTGAAGTG 220

QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 221 AACACGTTTCGGGTATGCTGGCTTACCGGTACTTCAAAAGCGCGCAAAATTTCCGTA 280

QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGlyLeuIleThrAsp 80
DB 281 ATGGGTACCGGTATGGGTATCCGCTGCTGCTCATCTACCAAGAACTGATCACCGAT 340

QY 81 PheGlyValLysLysIleLeuArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 341 TTCGGCGTGAAGAAATTTATCCGCTGCGGTTCCTGTGGCGGAGTTCTGCCGCGCGTAAAA 400

QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 401 CTGCGCGACGTCGTTATCGGTATGGGTGCTGACCGGATTCCAAAGTTAAACCGCATCCGT 460

QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 461 TTTAAAGACCATGACTTTGCGCGTATCGCTGACTTCGACATCGTGGTAAACGACGTAGAT 520

QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
DB 521 GCAGTAAAGCACCTGGGTATTCGCTGCGGTGGTAAACCTGTTCTCCGCTGACCTGTTTC 580

QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 581 TACTCTCCGACCGCGCAATGTTGACGCTGATGGGTAAGAAATACGGCATTTCTCGCGGTGAAA 640

QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
DB 641 ATGGAAGCGGTGGTATCTACGGCTGCTGAGAAATTTGGCGCGAAAGCCCTGACCATC 700

QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
DB 701 TGCACCGTATCTGACCATCCGACTCAGCAGACACCTGCGCGCTGACGCTCAGACT 760

QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuGlyAspLysGlu 239
DB 761 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGCGGATAAAGAG 817

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RESULT 7
BD261824 3128 bp DNA linear PAT 17-JUL-2003
LOCUS
DEFINITION Recombinant bacterial strains for the production of natural
ACCESSION BD261824
VERSION BD261824.1 GI:33071592
KEYWORDS nucleosides and modified analogues thereof.
SOURCE synthetic construct
ORGANISM artificial sequences.

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REFERENCE 1 (bases 1 to 3128)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
NORPHARMA SPA
COMMENT Patent: JP 2002533126-A 13 08-OCT-2002;
OS Artificial Sequence
PN JP 2002533126-A/13
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198

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PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: deoD cloned downstream CC
prac promoter
FH Key Location/Qualifiers
FT source 1..3128
FT /organism="Artificial Sequence".
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        Location/Qualifiers
            1..3128
                /organism="synthetic construct"
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ORIGIN
Alignment Scores: 1.44e-109 Length: 3128
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-2 (1-239) x BD261824 (1-3128)
QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
DB 198 ATGGCTACCCACACATTAATGAGAAATGGCGGATTCGCTGACGTAGTTTTCATGCCA 257
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 258 GCGGACCCGCTGCGTGGAGATATATTCCTGAAACTTTCCTTGAAGATGCCCGTGAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 318 AACACGTTCCGGTATGGTATCCCGGCTTACCGGATTCACAAAGCGCGCAAAATTCGGTA 377
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
DB 378 ATGGGTACACGATGGTATCCCGTCTCCATCTACACCAAGCAACTGATCACCGAT 437
QY 81 PheGlyValLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 438 TTCCGCTGAAGAAATATTCGCGTGGTTCCTGTCGCGAGTTCGCGCGCACTAAAC 497
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 498 CTGGCGACGCTGTTATCGGTATGGTCTCCATCTACACCAAGCAACTGATCACCGAT 557
QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 558 TTTAAAGACCATGACTTTCGCGTATCGGTATCGGTATCGGTATCGGTATCGGTATCGGT 617
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
DB 618 GCAGCTAAACACCTGGGTATGATTCGCGTGGTAACTTCCTCCGCTGACCTGCTTC 677
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 678 TACTCTCCGACGCGGAAATGTTTCGACGTATGAGAAATACGGCAATTCGCGGTGGAA 737
QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
DB 738 ATGGAACGCGTGTATTCAGCGCTCGCTGCAGAAATTTGGCGGAAAGCCCTGACCATC 797
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrAlaAlaGluArgGlnThr 220
DB 798 TGCACCGTATCTGACCATCCGACTCAGAGCAGACCACTGCGCGTGGCGTGCAGACT 857
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
DB 914
858 ACCTTCAACGACATGATCAAAATCGCAATCGGTAATCGGTTCTGCTGGCGGATAAAGAG 914
RESULT 8
AX027821
LOCUS AX027821 3128 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 13 from Patent WO0039307.
ACCESSION AX027821
VERSION AX027821.1 GI:10188665
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE
1 Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
Patent: WO 0039307-A 13 06-JUL-2000;
BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
GHISOTTI DANIELA (IT)
JOURNAL
FEATURES
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        Location/Qualifiers
            1..3128
                /organism="synthetic construct"
                /mol_type="unassigned DNA"
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ORIGIN
Alignment Scores: 1.44e-109 Length: 3128
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-2 (1-239) x AX027821 (1-3128)
QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
DB 198 ATGGCTACCCACACATTAATGAGAAATGGCGGATTCGCTGACGTAGTTTTCATGCCA 257
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 258 GCGGACCCGCTGCGTGGAGATATATTCCTGAAACTTTCCTTGAAGATGCCCGTGAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 318 AACACGTTCCGGTATGGTATCCCGGCTTACCGGATTCACAAAGCGCGCAAAATTCGGTA 377
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
DB 378 ATGGGTACACGATGGTATCCCGTCTCCATCTACACCAAGCAACTGATCACCGAT 437
QY 81 PheGlyValLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 438 TTCCGCTGAAGAAATATTCGCGTGGTTCCTGTCGCGAGTTCGCGCGCACTAAAC 497
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 498 CTGGCGACGCTGTTATCGGTATGGTCTCCATCTACACCAAGCAACTGATCACCGAT 557
QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 558 TTTAAAGACCATGACTTTCGCGTATCGGTATCGGTATCGGTATCGGTATCGGTATCGGT 617
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
DB 618 GCAGCTAAACACCTGGGTATGATTCGCGTGGTAACTTCCTCCGCTGACCTGCTTC 677
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 678 TACTCTCCGACGCGGAAATGTTTCGACGTATGAGAAATACGGCAATTCGCGGTGGAA 737
QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
DB 738 ATGGAACGCGTGTATTCAGCGCTCGCTGCAGAAATTTGGCGGAAAGCCCTGACCATC 797
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrAlaAlaGluArgGlnThr 220
DB 798 TGCACCGTATCTGACCATCCGACTCAGAGCAGACCACTGCGCGTGGCGTGCAGACT 857
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
DB 914
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QY 181 MetGluAlaAlaGlyTleTyGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrile 200
Db 738 ATGGAGCGCGCTGGTATCTACCGCGTCGCTGAGAAATTTGGCGCGAAAGCCCTGACCATC 797
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Db 798 TGCACCGTATCTGACCACATCCGACTACAGAGCAGACACCTGCCGCTGAGGCTGAGACT 857
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
Db 858 ACCTTCAAGACATGATCAAAATCGCACTGGAATCGTTCTCTGCGCGCATTAAGAG 914

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LOCUS BD261814 3383 bp DNA linear PAT 17-JUL-2003
DEFINITION Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
ACCESSION BD261814
VERSION BD261814.1 GI:33071582
KEYWORDS JP 2002533126-A/3.
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1 (bases 1 to 3383)
AUTHORS Bestetti, G., Cali, S., Ghisotti, D., Orsini, G., Tonon, G. and Zuffi, G.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 3 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
PN JP 2002533126-A/3
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI.
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: Plasmid
CC deod
FH Key Location/Qualifiers
FT gene (231)..(960).
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Alignment Scores:
Pred. No.: 1.59e-109 Length: 3383
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-2 (1-239) x BD261814 (1-3383)
QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
Db 240 ATGGCTACCCACACATTAATGCAAAATGGCGATTCGCTGAGTATTTGATGCCA 299
QY 21 GlyAspProLeuArgAlaLysTyrlleAlaGluThrPheLeuGluAspAlaArgGluVal 40
Db 300 GCGACCGCTCGCTGCGAGTATATTCCTTGAAGATGCCGCGGAGTG 359
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrlsGlyArgLysIleSerVal 60
Db 360 AACACGTTCCGGTATCTGGCTTACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 419
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrlsGluLeuIleThrAsp 80

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Db 420 ATGGGTACGGTATGGGTATCCGTCCTGCTCATCTACCAAAAGACTGATCACCGAT 479
QY 81 PheGlyValLysLysIleleArgValGlySerCysGlyValaValLeuProHisValLys 100
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QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
Db 540 CTGCGCGACGTCGTTATCGGTATGGTGCCTCACCGATTCCAAAGTTAACCCGATCCGT 599
QY 121 PheLysAspHisAspPheAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
Db 600 TTTAAAGACCATGACTTTGCCGCTATCGCTGATTCGACATCGTGCCTAAGCAGTAGAT 659
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe 160
Db 660 GCAGCTTAAGCACTGGGTATTGATCTCGTGGGTAACTGTTCTCCGCTGACCTGTTTC 719
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrlleLeuGlyValGlu 180
Db 720 TACTCTCCGACGCGGAAATGTTCCAGCTGATGGAAAAATACGGCATTCCTCGCGTGA 779
QY 181 MetGluAlaAlaGlyIleTyrlleGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrle 200
Db 780 ATGGAAGCGGCTGGTATCTACGGCTCGCTCAGAAATTTGGCGGAAAGCCCTGACCATC 839
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
Db 840 TGCACCGTATCTGACCACATCCGCACTCAGAGCAGACACCTGCCGCTGAGCGTCAGACT 899
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
Db 900 ACCTTCAAGACATGATCAAAATCGCACTGGAATCGTTCTCTGCGCGATAAGAG 956

RESULT 10
AX027811
LOCUS AX027811 3383 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 3 from Patent WO0039307.
ACCESSION AX027811
VERSION AX027811.1 GI:10188655
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1
AUTHORS Bestetti, G., Cali, S., Orsini, G., Tonon, G., Zuffi, G. and Ghisotti, D.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: WO 0039307-A 3 06-JUL-2000;
BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);
ORSINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
GHISOTTI DANIELA (IT)
FEATURES
source
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/organism="synthetic construct"
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/note="Plasmid"
ORIGIN
Alignment Scores:
Pred. No.: 1.59e-109 Length: 3383
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-2 (1-239) x AX027811 (1-3383)
QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20

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Db	240	ATGGCTACCCACACATTAATGAGAAATGGGGATTCGCTGACGTAGTTTGTATGCCA	299	downstream ptac
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Db	300	GGCGACCCGCTGGTGGGAAGTATATGCTGAACACTTCTCTGAAGATGCCGTGAAGTG	359	Key
QY	41	AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal	60	PH
Db	360	ACAACGTTCCGGGTATGCTGGCTTCACCGTACTTCAAAAGCCGCAAAATTTCCGTA	419	FT
QY	61	MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp	80	source
Db	420	ATGGGTACCGGTATGGTATCCCGTCTCTCCATCTACACCAAGAACTGATCACCGAT	479	FEATURES
QY	81	PheGlyValLysLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys	100	1..3934
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QY	101	LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg	120	/mol_type='genomic DNA'
Db	540	CTCGCGACGCTCGTTATCGGTATGGGTGCTGCACCGATTCGAAGTTAACCGCATCCGT	599	/db_xref='taxon:32630'
QY	121	PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp	140	ORIGIN
Db	600	TTTAAAGACCATGACTTTGCGCTATCGTGAATTCGACATGCTGCGTAAACGAGTAGAT	659	Alignment Scores:
QY	141	AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerAlaAspLeuPhe	160	Pred. No.: 1..92e-109
Db	660	GCAGCTAAAGCACTGGGTATTTGATGCTCGGTGGTAACTTCTCTCGCTGACCTGTC	719	Score: 1222.00
QY	161	TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu	180	Percent Similarity: 100.00%
Db	720	TACTCTCCGACGCGCAATATGTCAGCTGATGCGAATAATACGGCATCTCTCGCGTGG	779	Best Local Similarity: 99.58%
QY	181	MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle	200	Query Match: 99.76%
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QY	201	CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr	220	Gaps: 0
Db	840	TGCACCGTATCTGACCATCCGCACTCACGACGACACCATCGCTGCGGTGAGCGTCA	899	US-10-035-300A-2 (1-239) x BD261825 (1-3934)
QY	221	ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu	239	QY 1 MetAlaThrProHisIleLeuAlaGluMetGlyAspPheAlaAspValValLeuMetPro
Db	900	ACCTTCAACGACATGATCAAAATCGCACTCGATCCGTTCTGCTGGCGGTAAAGAG	956	Db 198 ATGGCTACCCACACATTAATGAGAAATGGCGGATTCGCTGACGTAGTTTGTATGCCA
RESULT 11				QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal
BD261825				Db - 258 GCGACCCCGTGGTGGGAAGTATATGCTGAACACTTCTCTGAAGATGCCGTGAAGTG
LOCUS				QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal
DEFINITION				Db 318 AACACGTTCCGGGTATGCTGGGCTTCACCGTACTTACAAAGCGCGCAAAATTTCCGTA
ACCESSION				QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp
VERSION				Db 378 ATGGGTACCGGTATGGTATCCCGTCTCTGCTCCATCTACACCAAGAACTGATCACCGAT
KEYWORDS				QY 81 PheGlyValLysLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys
SOURCE				Db 438 TTCCGGGTGAAGAAATATATCCCGTGGGTCTCTGTTGGCGCAGTCTCTGCCGACGATAAA
ORGANISM				QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg
REFERENCE				Db 498 CTGCGGACGCTCGTTATCGGTATGGGTGCTGCACCGATTCGCAAGTTAACCGCATCCGT
AUTHORS				QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp
TITLE				Db 558 TTTAAAGACCATGACTTTGCGCTATCGCTGATTCGACATGCTGCGTAAACGAGTAGAT
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				QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu
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				QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle
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				QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr
				Db 798 TGCACCGTATCTGACCATCCGCACTCACGACGACACCATGCGCTGAGCGTCAACT
				QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu
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				AX027822
				3934 bp
				DNA
				linear
				PAT 16-SEP-2000

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DEFINITION Sequence 14 from Patent WO0039307.
ACCESSION AX027822
VERSION AX027822.1 GI:10188666
SOURCE synthetic construct
ORGANISM synthetic construct
REFERENCE 1
AUTHORS Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
PATENT: WO 0039307-A 14 06-JUL-2000;
BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);
ORSINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
GHISOTTI DANIELA (IT)
FEATURES
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    1..3934
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    /mol_type="unassigned DNA"
    /db_xref="taxon:32630"
    /note="udp and deob cloned downstream ptac promoter"
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Pred. No.: 1,92e-109 Length: 3934
Score: 1222.00 Matches: 238
Percent Similarity: 100.00% Conservative: 1
Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
DB: 6 Gaps: 0
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QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 258 GCGGACCGCTGCGTGCAGATATATTCGTAACATTTTCCTTGAAGATGCGCGTGAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrLysGlyValGlyLysIleSerVal 60
DB 318 AACACAGTTTCGGGTATGCGGTTCACCGGTACTTACAAAGGCGCAAAATTTCCGTA 377
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
DB 378 ATGGGTACGGTATGGGTATCCCGTCTCTCATCTACCAAGAACTGATCACCAGT 437
QY 81 PheGlyValLysLysIleAlaArgValGlySerCysGlyAlaValLeuProHisValLys 100
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QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
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QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
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DEFINITION Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
ACCESSION BD261816
VERSION JP 2002533126-A/5.
SOURCE synthetic construct
ORGANISM synthetic construct
REFERENCE 1 (bases 1 to 4189)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 5 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
PN JP 2002533126-A/5
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: Plasmid
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FH Key Location/Qualifiers
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Best Local Similarity: 99.58% Mismatches: 0
Query Match: 99.76% Indels: 0
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QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 1106 GCGACCGCTGCGTGCAGATATATTCGTAACATTTCTTGAAGATGCGCGTGAAGTG 1165
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrLysGlyArgLysIleSerVal 60
DB 1166 AACACAGTTTCGGGTATGCGGTTCACCGGTACTTACAAAGGCGCAAAATTTCCGTA 1225
QY 61 MetGlyHisGlyValGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
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QY      121 PheLysAspHisAspPheAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
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QY      221 ThrPheAsnAspMetIleIysIleAlaLeuGluSerValLeuLeuGlyAspIysGlu 239
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LOCUS      AX027813                      4189 bp      DNA      linear      PAT 16-SEP-2000
DEFINITION Sequence 5 from Patent WO0039307.
ACCESSION  AX027813
VERSION     AX027813.1  GI:10188657
KEYWORDS   synthetic construct
SOURCE     synthetic construct
ORGANISM   artificial sequences.

REFERENCE  1
AUTHORS   Bestetti,G., Cali,S., Orsini,G., Tonon,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE     Recombinant bacterial strains for the production of natural
          nucleosides and modified analogues thereof
JOURNAL   Patent: WO 0039307-A 5 06-JUL-2000;
          BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
          ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
          GHISOTTI DANIELA (IT)
FEATURES   LOCATION/Qualifiers
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Percent Similarity: 100.00%      Conservative: 1
Best Local Similarity: 99.58%      Mismatches: 0
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DB:              6      Gaps:      0

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QY      21 GlyAspProIeuArgAlaLysTyrIleAlaGluThrPheIeuGluAspAlaArgGluVal 40

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QY      221 ThrPheAsnAspMetIleIysIleAlaLeuGluSerValLeuLeuGlyAspIysGlu 239
Db      1706 ACCTTCAACGACATGATCAAAATCGCACTCGAATTCGTTCTGCTGGCGGATAAAGAG 1762

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ACCESSION  AR264513
VERSION     AR264513.1  GI:29692752
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SOURCE     Unknown.
ORGANISM   Unclassified.
REFERENCE  1 (bases 1 to 5013)
AUTHORS   Sorscher,E.J., Parker,W.B., Waud,W., Gadi,V.K. and Bennett,L.L. Jr.
TITLE     Recombinant bacterial cells for delivery of FMP to tumor cells
JOURNAL   Patent: US 6491905-A 5 10-DEC-2002;
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Best Local Similarity: 99.58%      Mismatches: 0
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US-10-035-300A-2 (1-239) x AR264513 (1-5013)

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Job time : 2826 secs

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GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

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and is derived by analysis of the total score distribution.

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ALIGNMENTS

RESULT 1
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LOCUS AX087917
DEFINITION Sequence 3 from Patent WO0114566.
ACCESSION AX087917
VERSION AX087917.1 GI:13396895
KEYWORDS
SOURCE Escherichia coli
ORGANISM Escherichia coli
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Escherichia.
REFERENCE 1
Tischer, W., Ihlenfeldt, H.G., Barzu, O., Sakamoto, H., Pistotnik, E.,
Marliere, P. and Pochet, S.
AUTHORS
TITLE Enzymatic synthesis of deoxyribonucleosides

JOURNAL Patent: WO 0114566-A 3 01-MAR-2001;
Roche Diagnostics GmbH (DE) ; INSTITUT PASTEUR (FR) ; Pharma-
Walldorf GmbH & Co. KG (DE)
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ORIGIN source
Query Match 99.8%; Score 718.4; DB 6; Length 720;
Best Local Similarity 99.9%; Pred. No. 1.3e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 ATGGCTACCCACACATAATGAGAAATGGCGATTTCGCTGACGTAGTTTGATGCCA 60
DB 1 ATGGCTACCCACACATAATGAGAAATGGCGATTTCGCTGACGTAGTTTGATGCCA 60
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DB 61 GCGACCCCGCTGCTGCGAAGTATATGCTGAAACTTTCCTTGAAGATGCCGTGAAGTG 120
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DB 121 AACAACTTTCGGGTATGCTGGGCTTTCACCGTACTTACAAAGCGCGCAAAATTCGGTA 180
QY 181 ATGGGTACCGGTATGGGTATCGGCTGCTGCTCCTGCTCCTGCTCCTGCTCCTGCTCCTGCT 240
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DB 301 CTGCGCGACGTGCTTATCGGTATGGGTATGGGTATGGGTATGGGTATGGGTATGGGTATGGGT 360
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DB 361 TTAAAGACCATGACATTCGCGTATCGGTATCGGTATCGGTATCGGTATCGGTATCGGTATCGGT 420
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RESULT 2
AX590437
LOCUS AX590437
DEFINITION Sequence 3 from Patent EP1254959.
ACCESSION AX590437
VERSION AX590437.1 GI:27949070
KEYWORDS
SOURCE Escherichia coli
ORGANISM Escherichia coli
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Escherichia.
REFERENCE 1
AUTHORS Araki, T., Ikeda, I., Matoishi, K., Abe, R., Oikawa, T., Matsuba, Y.,
Ishibashi, H., Nagahara, K. and Fukui, Y.
TITLE Method for producing cytosine nucleoside compounds
JOURNAL Patent: EP 1254959-A 3 06-NOV-2002;
MITSUI CHEMICALS, INC. (JP)
FEATURES Location/Qualifiers
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Query Match 99.8%; Score 718.4; DB 6; Length 720;
Best Local Similarity 99.9%; Pred. No. 1.3e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 ATGGCTACCCACACATAATGAGAAATGGCGATTTCGCTGACGTAGTTTGATGCCA 60
DB 1 ATGGCTACCCACACATAATGAGAAATGGCGATTTCGCTGACGTAGTTTGATGCCA 60
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RESULT 3
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LOCUS BD187724 720 bp DNA linear PAT 17-JUL-2003
DEFINITION A method of producing a cytosine nucleoside compound.
ACCESSION BD187724
VERSION BD187724.1 GI:32997463
KEYWORDS JP 2003018997-A/3.
SOURCE Escherichia coli
ORGANISM Escherichia coli

REFERENCE
AUTHORS Araki,T., Ikeda,I., Matoishi,K., Abe,R., Oikawa,T., Matsuba,Y.,
Nagahara,K., Fukui,Y. and Ishibashi,H.
TITLE A method of producing a cytosine nucleoside compound
JOURNAL PATENT: JP 2003018997-A 3 21-JAN-2003;
MITSUI CHEMICALS INC
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PN JP 2003018997-A/3
PD 21-JAN-2003
PF 01-MAY-2002 JP 2002129867
PI TADASHI ARAKI, ICHIRO IKEDA, KAORI MATOISHI, REIKO ABE, TOSHIHIRO
PI OIKAWA,
PI YASUKO MATSUBA, KIYOTERU NAGAHARA, YASUSHI FUKUIRI, HIROKI PI
ISHIBASHI
PC C12N15/09, C12N1/15, C12N1/19, C12N1/21, C12N5/10, C12N9/10 PC
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PC C12N5/00
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Location/Qualifiers
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Query Match 99.8%; Score 718.4; DB 6; Length 720;
Best Local Similarity 99.9%; Pred. No. 1.3e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 ATGGTACCCACACATTAATGCAGAAATGGCGATTTCGCTGACGTAGTTTGTATGCCA 60
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RESULT 4
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LOCUS E.coli purine nucleoside phosphorylase (deoD) gene, complete cds.
DEFINITION M60917
ACCESSION M60917
VERSION M60917.1 GI:147308
KEYWORDS purine nucleoside phosphorylase.
SOURCE Escherichia coli
ORGANISM Escherichia coli

REFERENCE
AUTHORS Hersfield,M.S., Chaffee,S., Koro-Johnson,L., Mary,A., Smith,A.A.
and Short,S.A.
TITLE Use of site-directed mutagenesis to enhance the epitope-shielding
effect of covalent modification of proteins with polyethylene
glycol
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 88 (16), 7185-7189 (1991)
MEDLINE 91334430
PUBMED 1714590
COMMENT Original source text: Escherichia coli (strain K-12) DNA.
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Best Local Similarity 99.9%; Pred. No. 1.4e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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DB 243 AACAAAGTTTCGGGTATGCTGGCTTACCGGTACTTACAAAGCCGCGCAAAATTTCCGTA 302
QY 181 ATGGGTACCGGTATGGTATCCCGTCTGCTCCATCTACACCAAGAACTGATCACCGAT 240
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QY 241 TTCGGGTGAAGAAATTAATCCGGTGGTTCCTGTGGCGAGTTCTTGGCGACGTAAAA 300
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QY 301 CTGGGAGCGTGTATCGGTATGGTATGGTATGGTATGGTATGGTATGGTATGGTATGGT 360
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DB 783 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGCGGATAAAGATA 842

RESULT 5
BD261823 3031 bp DNA linear PAT 17-JUL-2003
LOCUS
DEFINITION
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof.
BD261823
ACCESSION
BD261823.1 GI:33071591
VERSION
JP 2002533126-A/12
KEYWORDS
SOURCE
synthetic construct
ORGANISM
artificial sequences.
REFERENCE
1 (bases 1 to 3031)
AUTHORS
Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
JOURNAL
Patent: JP 2002533126-A 12 08-OCT-2002;
NORPHARMA SPA
COMMENT
OS Artificial Sequence
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LOCUS AX027820 3031 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 12 from Patent WO0039307.
ACCESSION AX027820
VERSION AX027820.1 GI:10188664
KEYWORDS
SOURCE synthetic construct
ORGANISM synthetic construct
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REFERENCE
1 Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
  Recombinant bacterial strains for the production of natural
  nucleosides and modified analogues thereof
  Patent: WO 0039307-A 12 06-JUL-2000;
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ORIGIN
Query Match 99.8%; Score 718.4; DB 6; Length 3031;
Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 ATGGTACCCACACATTAATCGAGAAATGGCGATTCGCTGACGTAGTTTGTATGCCA 60
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RESULT 7
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LOCUS BD261824 3128 bp DNA linear PAT 17-JUL-2003
DEFINITION Recombinant bacterial strains for the production of natural
          nucleosides and modified analogues thereof.
ACCESSION BD261824
VERSION BD261824.1 GI:33071592
KEYWORDS JP 2002533126-A/13.
SOURCE synthetic construct
ORGANISM synthetic construct
          artificial sequences.
REFERENCE
1 (bases 1 to 3128)
  Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
  Recombinant bacterial strains for the production of natural
  nucleosides and modified analogues thereof
  Patent: JP 2002533126-A 13 08-OCT-2002;
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  PN JP 2002533126-A/13
  PD 08-OCT-2002
  PF 23-DEC-1999 JP 2000591198
  PR 23-DEC-1998 IT MI 98A002792
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  PI GIANCARLO TONON,GABRIELE ZUFFI
  PC C12N15/09,C12N1/21,C12N9/10/C12P19/38,C12P19/40,C12N15/00 CC
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Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 301 CTGCGGACGTCGTTATCGGTATGGGTGCTTGCACCGATTCCAAAGTTTAAACCGATCCGT 360
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RESULT 10						
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LOCUS	AX027811	Sequence 3	from Patent WO009307.	3383 bp	DNA	linear
DEFINITION	AX027811	Accession				
VERSION	AX027811.1	GI:	10188655			PAT 16-SEP-2000

ORIGIN	Query Match	Score	718.4;	DB 6;	Length	3383;			
	Best Local Similarity	99.9%;	Pred. No. 1.5e-180;						
	Matches 719;	Conservative	0;	Mismatches	1;	Indels	0;	Gaps	0;
Qy	1	ATGGCTACCCACACATTAATG	CAGAAATGGCGAATTCGCTG	CACGTAGTTTGTGATGCCCA	60				
Db	240	ATGGCTACCCACACATTAATG	CAGAAATGGCGAATTCGCTG	CACGTAGTTTGTGATGCCCA	239				
Qy	61	GGCGACCGGCTGGTGGCAAGT	ATATGCTGAAACTTTCTTGAAG	ATGCCCGCTGAAGTG	120				
Db	300	GGCGACCGGCTGGTGGCAAGT	ATATGCTGAAACTTTCTTGAAG	ATGCCCGCTGAAGTG	359				
Qy	121	AACAAAGTTTCGGGTATGCTGG	CGTTACCGGTACTTAAAGGCG	CGAAATTTCCGTA	180				
Db	360	AACAAAGTTTCGGGTATGCTGG	CGTTACCGGTACTTAAAGGCG	CGAAATTTCCGTA	419				
Qy	181	ATGGGTACGGTATGGTATCCG	CTCCTGCTCATCTACCAAAG	CAACTGATCCGAT	240				
Db	420	ATGGGTACGGTATGGTATCCG	CTCCTGCTCATCTACCAAAG	CAACTGATCCGAT	479				
Qy	241	TTCCGGCTGAAGAAATTAATC	CGCTGGGTTCCTGTGGCGAGT	TCTGCCGACGTAATA	300				
Db	480	TTCCGGCTGAAGAAATTAATC	CGCTGGGTTCCTGTGGCGAGT	TCTGCCGACGTAATA	539				
Qy	301	CTCGCGACGTCGTTATCGGT	ATGGTGGCTGCACCGATTC	CAAAAGTTAACCGCATCCGT	360				
Db	540	CTCGCGACGTCGTTATCGGT	ATGGTGGCTGCACCGATTC	CAAAAGTTAACCGCATCCGT	599				
Qy	361	TTTAAAGACATGACTTTGCG	GTATCGGTGACTTCGATGGT	TCGTAACGAGTAGAT	420				
Db	600	TTTAAAGACATGACTTTGCG	GTATCGGTGACTTCGATGGT	TCGTAACGAGTAGAT	659				
Qy	421	GCAGCTAAAGCACTGGTATT	GATGCTCGGTGGGTAACTGT	TCTCCGTGACCTGTTTC	480				
Db	660	GCAGCTAAAGCACTGGTATT	GATGCTCGGTGGGTAACTGT	TCTCCGTGACCTGTTTC	719				
Qy	481	TACTCTCCGACGGCGAAATG	TTTCGACGTGATGGAAATAT	CGGCATTCGCGGTGGAA	540				
Db	720	TACTCTCCGACGGCGAAATG	TTTCGACGTGATGGAAATAT	CGGCATTCGCGGTGGAA	779				
Qy	541	ATGGAAGCGCTGGTATCTAC	GCGCTGCCTGCAGAAATTT	GGCGCGAAGCCCTGACCATC	600				
Db	780	ATGGAAGCGCTGGTATCTAC	GCGCTGCCTGCAGAAATTT	GGCGCGAAGCCCTGACCATC	839				
Qy	601	TGCACCGTATCTGACCAAT	CCGCACTCAAGACAGACCA	CTGCCGCTGAGCGTCAAGCT	660				
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LOCUS	3934 bp DNA linear PAT 17-JUL-2003
DEFINITION	Recombinant bacterial strains for the production of natural nucleosides and modified analogues thereof.
ACCESSION	BD261825
VERSION	BD261825.1 GI:33071593
KEYWORDS	JP 2002533126-A/14.
SOURCE	synthetic construct
ORGANISM	synthetic construct
REFERENCE	artificial sequences.
AUTHORS	1 (bases 1 to 3934)
TITLE	Besetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
JOURNAL	Recombinant bacterial strains for the production of natural nucleosides and modified analogues thereof
COMMENT	Patent: JP 2002533126-A 14 08-OCT-2002; NORPHARMA SPA
	OS Artificial Sequence

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PN JP 2002533126-A/14
PD 08-OCT-2002
PP 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
  ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10, C12P19/38, C12P19/40, C12N15/00 CC
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CC promoter
PH Key
PI source
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  Location/Qualifiers
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  Best Local Similarity 99.9%; Pred. No. 1.5e-180;
  Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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  Db 198 ATGGCTACCCACACATTAATGAGAAATGGGCGATTTCGCTGACGCTAGTTTGTATGCCA 257
  QY 61 GGCAGCCCGCTGCTGCGAAGTATATTGCTGAAACTTTTCCTTGAAGATGCCCGTGAAGTG 120
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  QY 301 CTGCGGACGCTGTTATCGGTATGGGTGCTGACCGATTCGACATGTTGCGGCGTGAAGTAA 360
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  QY 661 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGCGGATAAAGATAA 720
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LOCUS AX027822 3934 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 14 from Patent WO0039307.
ACCESSION AX027822
VERSION AX027822.1 GI:10188666
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE
  1 Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
  Recombinant bacterial strains for the production of natural
  nucleosides and modified analogues thereof
  Patent: WO 0039307-A 14 06-JUL-2000;
  BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);
  ORSINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
  GHISOTTI DANIELA (IT)
  Location/Qualifiers
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  /note="udp and deod cloned downstream ptac promoter"
ORIGIN
  Query Match 99.8%; Score 718.4; DB 6; Length 3934;
  Best Local Similarity 99.9%; Pred. No. 1.5e-180;
  Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
  QY 1 ATGGCTACCCACACATTAATGAGAAATGGGCGATTTCGCTGACGCTAGTTTGTATGCCA 60
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  QY 181 ATGGGTACAGGTATGGGTATCCCGTCTCTGCTCCATCTACACCAAGAACTGATCACCGAT 240
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DEFINITION Recombinant bacterial strains for the production of natural
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ACCESSION BD261816
VERSION   BD261816.1 GI:33071584
KEYWORDS  JP 2002533126-A/5.
SOURCE    synthetic construct
ORGANISM  artificial construct
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REFERENCE Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
AUTHORS  Recombinant bacterial strains for the production of natural
TITLE    nucleosides and modified analogues thereof
JOURNAL  Patent: JP 2002533126-A 5 08-OCT-2002;
        NORPHARMA SPA
COMMENT  OS Artificial Sequence
        PN JP 2002533126-A/5
        PD 08-OCT-2002
        PF 23-DEC-1999 JP 2000591198
        PR 23-DEC-1998 IT MI 98A002792
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        PI GIANCARLO TONON,GABRIELE ZUFFI
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Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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DEFINITION Sequence 5 from Patent WO0039307.
ACCESSION AX027813
VERSION   AX027813.1 GI:10188657
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SOURCE    synthetic construct
ORGANISM  artificial sequences
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REFERENCE Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
AUTHORS  Recombinant bacterial strains for the production of natural
TITLE    nucleosides and modified analogues thereof
JOURNAL  Patent: WO 0039307-A 5-06-JUL-2000;
        BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
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Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 ATGGCTACCCACACATTAATGCAGAAATGGCGAATTCGCTGACGTAGTTTGATGCCA 60
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QY      121 AACACAGTTCGCGGTATCTGGGCTTCCCGGTACTTACAAAGCGCGCAAAATTTCCGTA 180
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DEFINITION Sequence 5 from patent US 6491905.
ACCESSION AR264513
VERSION AR264513.1 GI:29692752
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
REFERENCE 1 (bases 1 to 5013)
AUTHORS Sorscher, E.J., Parker, W.B., Waud, W., Gadi, V.K., and Bennett, L.L., Jr.
TITLE Recombinant bacterial cells for delivery of PNP to tumor cells
JOURNAL Patent: US 6491905-A 5 10-DEC-2002;
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Query Match 99.8%; Score 718.4; DB 6; Length 5013;
Best Local Similarity 99.9%; Pred. No. 1.5e-180;
Matches 719; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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GenCore version 5.1.6
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19: em_mu.*
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21: em_ox.*
22: em_ov.*
23: em_pat.*
24: em_ph.*
25: em_pl.*
26: em_ro.*
27: em_sts.*
28: em_un.*

29: em_vi.*
30: em_htg_hum.*
31: em_htg_inv.*
32: em_htg_other.*
33: em_htg_mus.*
34: em_htg_pln.*
35: em_htg_rnd.*
36: em_htg_mam.*
37: em_htg_vrt.*
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39: em_htgo_hum.*
40: em_htgo_mus.*
41: em_htgo_other.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	1222	99.7	720	6	AX087917	Sequence
2	1222	99.7	720	6	AX590437	Sequence
3	1222	99.7	720	6	BD187724	A method
4	1222	99.7	1249	1	ECOPNP	M60917 E.coli puri
5	1222	99.7	3031	6	BD261823	BD261823 Recombina
6	1222	99.7	3031	6	AX027820	Sequence
7	1222	99.7	3128	6	BD261824	BD261824 Recombina
8	1222	99.7	3128	6	AX027821	Sequence
9	1222	99.7	3383	6	BD261814	BD261814 Recombina
10	1222	99.7	3383	6	AX027811	Sequence
11	1222	99.7	3934	6	BD261825	BD261825 Recombina
12	1222	99.7	3934	6	AX027822	Sequence
13	1222	99.7	4189	6	BD261816	BD261816 Recombina
14	1222	99.7	4189	6	AX027813	Sequence
15	1222	99.7	5013	6	AR264513	AR264513 Sequence
16	1222	99.7	5241	6	BD261818	BD261818 Recombina
17	1222	99.7	5241	6	AX027815	Sequence
18	1222	99.7	5495	6	BD261815	BD261815 Recombina
19	1222	99.7	5495	6	AX027812	Sequence
20	1222	99.7	6046	6	BD261826	BD261826 Recombina
21	1222	99.7	6046	6	AX027823	Sequence
22	1222	99.7	6269	6	BD261820	BD261820 Recombina
23	1222	99.7	6269	6	AX027817	Sequence
24	1222	99.7	6299	6	BD261821	BD261821 Recombina
25	1222	99.7	6299	6	AX027818	Sequence
26	1222	99.7	6301	6	BD261817	BD261817 Recombina
27	1222	99.7	6301	6	AX027814	Sequence
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33	1222	99.7	338534	1	ECOW93	U14003 Escherichia
34	1221	99.6	10535	1	AE015447	AE015447 Shigella
35	1221	99.6	86898	1	AE016772	AE016772 Escherich
36	1221	99.6	225944	1	AE016993	AE016993 Shigella
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39	1187	96.8	284233	1	AE016849	AE016849 Salmonell
40	1182	96.4	21405	1	AE008915	AE008915 Salmonell
41	1162	94.8	732	6	AR384902	AR384902 Sequence
42	1106	90.2	11093	1	AE013977	AE013977 Yersinia
43	1106	90.2	214050	1	AJ414142	AJ414142 Yersinia
44	1094	89.2	11267	1	AF525420	AF525420 Xenorhabd
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ALIGNMENTS

RESULT 1

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LOCUS AX087917 720 bp DNA linear PAT 17-MAR-2001
DEFINITION Sequence 3 from Patent WO0114566.
ACCESSION AX087917
VERSION AX087917.1 GI:13396895
KEYWORDS Escherichia coli
SOURCE Escherichia coli
ORGANISM Escherichia coli
REFERENCE 1
AUTHORS Tischer,W., Ihlenfeldt,H.G., Barzu,O., Sakamoto,H., Pistotnik,E.,
Marliere,P. and Pochet,S.
Enzymatic synthesis of deoxyribonucleosides
Patent: WO 0114566-A 3 01-MAR-2001;
Roche Diagnostics GmbH (DE) ; INSTITUT PASTEUR (FR) ; Pharma-
Waldhof GmbH & Co. KG (DE)
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ORIGIN
Alignment Scores:
Pred. No.: 1.13e-111 Length: 720
Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0
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Db 1 ATGGCTACCCACACATTAATGCGAATGGGCGATTTCGCTGACGTAGTTTGGATGCCA 60
QY 21 GlyAspProLeuArgAlaIysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
Db 61 GCGACCCGCTGCTGCGAAGTATATTGCTGAAACTTTCCTTGAAGATGCCCGTGAAGTG 120
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgIleSerVal 60
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LOCUS AX590437 720 bp DNA linear PAT 27-JAN-2003
DEFINITION Sequence 3 from Patent EP1254959.
ACCESSION AX590437
VERSION AX590437.1 GI:27949070
KEYWORDS Escherichia coli
SOURCE Escherichia coli
ORGANISM Escherichia coli
REFERENCE 1
AUTHORS Araki,T., Ikeda,I., Matoishi,K., Abe,R., Oikawa,T., Matsuba,Y.,
Ishibashi,H., Nagahara,K. and Fukui,Y.
TITLE Method for producing cytosine nucleoside compounds
JOURNAL Patent: EP 1254959-A 3 06-NOV-2002;
MITSUI CHEMICALS, INC. (JP)
FEATURES
Location/Qualifiers
1..720
/organism="Escherichia coli"
/mol_type="unassigned DNA"
/db_xref="taxon:562"
ORIGIN
Alignment Scores:
Pred. No.: 1.13e-111 Length: 720
Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0
DB: 6 Gaps: 0
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QY 21 GlyAspProLeuArgAlaIysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
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QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgIleSerVal 60
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 Db 421 GCAGCTAAAGCAGCTGGTATTGATGCTCGGTGGGTAACTGTCTCCGCTGACCTGTTTC 480
 QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
 Db 481 TACTCTCCGAGCGCGGAAATGTCGACGTGATGGAATAATACGGCATTCCTCGCGGTGAA 540
 QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyValAlaLysAlaLeuThrIle 200
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RESULT 3

BD187724 720 bp DNA linear PAT 17-JUL-2003
 LOCUS BD187724
 DEFINITION A method of producing a cytosine nucleoside compound.

ACCESSION BD187724.1 GI:32997463

VERSION JP 2003018997-A/3.

KEYWORDS Escherichia coli

SOURCE Escherichia coli

ORGANISM Escherichia coli

REFERENCE Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;

1 (bases 1 to 720)

Araki, T., Ikeda, I., Matoishi, K., Abe, R., Oikawa, T., Matsuba, Y.,

Nagahara, K., Fukui, Y. and Ishibashi, H.

A method of producing a cytosine nucleoside compound

Patent: JP 2003018997-A 3 21-JAN-2003;

MITSUMI CHEMICALS INC

OS Escherichia coli

PN JP 2003018997-A/3

PD 21-JAN-2003

PF 01-MAY-2002 JP 2002129867

PI TADASHI ARAKI, ICHIRO IKEDA, KAORI MATOISHI, REIKO ABE, TOSHIHIRO

PI OIKAWA, T.

PI YASUKO MATSUBA, KIYOTERU NAGAHARA, YASUSHI FUKUI, HIROKI PI

ISHIBASHI

PC C12N1/09, C12N1/15, C12N1/19, C12N1/21, C12N5/10, C12N9/10 PC

PC C12P19/40, C12N15/00,

PC C12N5/00

CC A method of producing a cytosine nucleoside compound FH Key

Location/Qualifiers

FT source 1..720

FT Location/Qualifiers

1..720

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Pred. No.: 1,13e-111 Length: 720

Score: 1222.00 Matches: 238

Percent Similarity: 99.58% Conservative: 0

Best Local Similarity: 99.58%

Query Match: 99.67%

DB:

Mismatches: 1

Indels: 0

Gaps: 0

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QY 81 PheGlyValLysLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100

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Db 601 TGCACCGTATCTGACCATCCGACTACGACGACGACCACTGCCGCTGAGCGTCAGACT 660

QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239

Db 661 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTCTGCGCGGATAAAGAG 717

RESULT 4

ECOPNP

LOCUS

DEFINITION

ACCESSION

VERSION

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

MEDLINE

ECOPNP 1249 bp DNA linear BCT 26-APR-1993
 E.coli purine nucleoside phosphorylase (deod) gene, complete cds.

M60917 GI:147308

M60917.1 purine nucleoside phosphorylase.

Escherichia coli

Escherichia coli

Escherichia coli

Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;

Enterobacteriaceae; Escherichia.

1 (bases 1 to 1249)

Hershfield, M.S., Chaffee, S., Koro-Johnson, L., Mary, A., Smith, A.A.

and Short, S.A.

Use of site-directed mutagenesis to enhance the epitope-shielding

effect of covalent modification of proteins with polyethylene

glycol

Proc. Natl. Acad. Sci. U.S.A. 88 (16), 7185-7189 (1991)

91334430

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DB 183 GCGACCCGCTGCGTGGCAAGTATATTGCTGAAACTTTTCCTTGAAGATGCCCGTGAAGTG 242
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 243 AACACGCTTCGCGTATGCTGGGGTTCACCGGTACTTACAAAGCCGCAAAATTCGTA 302
QY 61 MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
DB 303 ATGGGTACGGTATGGTATCCCGTCTGCTCCATCTACACAAAGAACTGATCACCGAT 362
QY 81 PheGlyValLysLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
DB 363 TTCGCGCTGAAGAAATATCCGCTGGGTTCCTGTCGCGCAGTTCCTGCCACGTAATA 422
QY 101 LeuArgAspValValIleGlyMetGlyValaCysThrAspSerLysValAsnArgIleArg 120
DB 423 CTGGCGGACGTCGTTATCGGTATGGGTGCTTCGACCGATTCCAAAGTTAACCGCATCGT 482
QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 483 TTTAAGACCATGACTTTTCCCGCTATCGCTGACATTCGACATGGTTCGCTAACCGCATGAT 542
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
DB 543 GCAGCTAAGACATGGGTATTGATGCTCGCGTGGGTAAACCTGTTCTCCGCTGACCTGTTTC 602
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QY 181 MetGluAlaAlaGlyTyrGlyValAlaAlaGluPheGlyValLysAlaLeuThrIle 200
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QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
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RESULT 5
BD261823 3031 bp DNA linear PAT 17-JUL-2003
LOCUS Recombinant bacterial strains for the production of natural
DEFINITION nucleosides and modified analogues thereof.
ACCESSION BD261823
VERSION BD261823.1 GI:33071591
KEYWORDS JP 2002533126-A/12.
SOURCE synthetic construct
ORGANISM synthetic construct
          artificial sequences.
REFERENCE 1 (bases 1 to 3031)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
        nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 12 08-OCT-2002;
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COMMENT OS Artificial Sequence
        PN JP 2002533126-A/12
        PD 08-OCT-2002
        PF 23-DEC-1999 JP 2000591198
        PR 23-DEC-1998 IT MI 98A002792
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        ORSINI.
        PI GIANCARLO TONON,GABRIELE ZUFFI
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  Query Match:     99.67%         Indels:      0
  DB:              6              Gaps:         0

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QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
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 DB 221 AACAAAGTTCGCGGTATGCTGGGTTTACCGGTACTTACAAAGCCGCAAAATTTCCGTA 280

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 DB 281 ATGGGTACACGATATGGGTATCCCTGCTGCTCCATCTACCAAGAACTGATCACCGAT 340

QY 81 PheGlyValLysLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
 DB 341 TTCCGCGTGAAGAAATATCCGCGTGGGTTCCTGTGCGCAGTTCTGCGCAGTAAAA 400

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 DB 521 GCAGCTAAAGCACTGGGTATGATGCTGCGGTAAACCTGTCTCCGCTGACCTGTTTC 580

QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
 DB 581 TACTCTCCGACGCGCAATGTTTCGACGTGATGGAAATACCGCATTTCTCGCGTGGAA 640

QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
 DB 641 ATGGAAGCGCTGGTATCTACGCGCTGCTGCAGAAATTTGGCGGAAAGCCCTGACCAATC 700

QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
 DB 701 TGCACCGTATCTGACCACTCCGACCTCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGT 760

QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
 DB 761 ACCTTCAAGCATGATCAAAATCGCATCGGAATCCGTTCTGCTGGCGGATAAAGAG 817

RESULT 6
 AX027820
 LOCUS
 DEFINITION Sequence 12 from Patent WO0039307.
 ACCESSION AX027820
 VERSION AX027820.1 GI:10188664
 KEYWORDS
 SOURCE synthetic construct
 ORGANISM artificial sequences.

REFERENCE
 1 Bestetti, G., Cali, S., Orsini, G., Tonon, G., Zuffi, G. and Ghisotti, D.
 Recombinant bacterial strains for the production of natural
 nucleosides and modified analogues thereof
 Patent: WO 0039307-A 12 06-JUL-2000;
 BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
 ORSINI GASTANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
 GHISOTTI DANIELA (IT)

FEATURES
 Location/Qualifiers
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 /organism="synthetic construct"
 /mol_type="unassigned DNA"
 /db_xref="taxon:32630"
 /note="udp and deoB cloned into pGM746 without upstream
 ptac promoter"

ORIGIN
 Alignment Scores:
 Pred. No.: 6,96e-111 Length: 3031
 Score: 1222.00 Matches: 238
 Percent Similarity: 99.58% Conservative: 0
 Best Local Similarity: 99.58% Mismatches: 1
 Query Match: 99.67% Indels: 0

DB: 6 Gaps: 0
 US-10-035-300A-4 (1-239) x AX027820 (1-3031)

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QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
 DB 161 GGCACCCGCTGGTGGCAAGTATTTCTGGAACCTTTCTTGAAGATGCCCGTGAAGTG 220

QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
 DB 221 AACAAAGTTCGCGGTATGCTGGGCTTACCGGTACTTACAAAGCCGCAAAATTTCCGTA 280

QY 61 MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
 DB 281 ATGGGTACACGATGATGGGTATCCGCTGCTGCTGCACCGATTTCCAAAGTTAACCGATCCGT 340

QY 81 PheGlyValLysLysIleIleArgValGlySerCysGlyAlaValLeuProHisValLys 100
 DB 341 TTCCGCGTGAAGAAATATCCGCGTGGGTTCCTGTGCGCAGTTCTGCGCAGTAAAA 400

QY 101 LeuArgAspValValIleGlyMetGlyValAlaCysThrAspSerLysValAsnArgIleArg 120
 DB 401 CTGCGGACGTCGTATTCGATGCGGTATGCGTGCACCGATTTCCAAAGTTAACCGATCCGT 460

QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
 DB 461 TTTAAAGACCATGACTTTGCGGCTATCGCTGACTTTCGACATGGTGCCTAACGCGATAGAT 520

QY 141 AlaAlaLysAlaLeuGlyIleArgValAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
 DB 521 GCAGCTAAAGCACTGGGTATGATGCTGCGGTAAACCTGTCTCCGCTGACCTGTTTC 580

QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
 DB 581 TACTCTCCGACGCGCAATGTTTCGACGTGATGGAAATACCGCATTTCTCGCGTGGAA 640

QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
 DB 641 ATGGAAGCGCTGGTATCTACGCGCTGCTGCAGAAATTTGGCGGAAAGCCCTGACCAATC 700

QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
 DB 701 TGCACCGTATCTGACCACTCCGACCTCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGT 760

QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
 DB 761 ACCTTCAAGCATGATCAAAATCGCATCGGAATCCGTTCTGCTGGCGGATAAAGAG 817

BD261824
 3128 bp DNA linear PAT 17-JUL-2003
 Recombinant bacterial strains for the production of natural
 nucleosides and modified analogues thereof.

BD261824
 BD261824.1 GI:33071592
 JP 2002533126-A/13.
 synthetic construct
 SOURCE
 ORGANISM
 REFERENCE
 1 (bases 1 to 3128)
 Bestetti, G., Cali, S., Ghisotti, D., Orsini, G., Tonon, G. and Zuffi, G.
 Recombinant bacterial strains for the production of natural
 nucleosides and modified analogues thereof
 Patent: JP 2002533126-A 13 08-OCT-2002;
 NORPHARMA SPA
 OS Artificial Sequence
 PN JP 2002533126-A/13
 PD 08-OCT-2002
 PF 23-DEC-1999 JP 2000591198

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PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORISINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N15/21, C12N19/10, C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: deod cloned downstream CC
ptac promoter Location/Qualifiers
FH Key 1. 3128
FT source /organism="Artificial Sequence".
FT Location/Qualifiers
1. 3128
/organism="synthetic construct"
/mol_type="genomic DNA"
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FEATURES
source
ORIGIN
Alignment Scores: 7.25e-111 Length: 3128
Pred. No.: 1222.00 Matches: 238
Score: 99.58% Conservative: 0
Percent Similarity: 99.58% Mismatches: 1
Best Local Similarity: 99.67% Indels: 0
Query Match: 99.67% Gaps: 0
DB: 6

US-10-035-300A-4 (1-239) x BD261824 (1-3128)
QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
DB 198 ATGGCTACCCACACATTAATGCAGAAATGGCGATTTCGCTGACGTAGTTTTCATGCCA 257
QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 258 GGCAGCCGCTGCTGGCAAGTATATTCTGTAAGTATTCCTTGAAGATGCCCGTGAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 318 AACAAAGTTCGCGTATGCTGGCTTACCGGTACTTACAAAGCGCCGCAAAATTTCCGTA 377
QY 61 MetGlyHisGlyMetGlyProSerCysSerIleTyrThrLysGluLeuThrAsp 80
DB 378 ATGGGTACCGGTATGGGTATCCGCTCTCCATCTACACCAAGAACTGATCCCGAT 437
QY 81 PheGlyValLysLysIleAlaAspPheAlaAlaGluPheGlyAlaLysValAsnAlaValAsp 140
DB 558 TTAAAGACCATGACTTTGCCGCTATCGCTGACATTCGACATGCTGCGTAAACGACGTAGAT 617
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
DB 618 GCAGCTAAAGCACTGGGTATTGATCGCTGGGTGATACCTTTCTCCGCTGACCTGTTTC 677
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 678 TACTCTCGGACGGCGAAATGTTCCAGCTGATGGAAATAATACGGCATTTCTCGCGCTGAA 737
QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
DB 738 ATGGAAGCGGCTGGTATCTACGGCTGCTGAGAAATTTGGCGGAAAGCCCTGACCATC 797
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
DB 798 TGACCGGTATCTGACCATTCGCTGAGGACCATTCGCGCTGAGGCTGAGCT 857
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspGlyGlu 239

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DB 858 ACCTTCAACGACATGATCAAAATCGCACTGGATCGTTCTGCTGGCGATAAGAG 914

RESULT 8
AX027821
LOCUS 3128 bp DNA linear PAT 16-SEP-2000
DEFINITION Sequence 13 from Patent WO0039307.
ACCESSION AX027821
VERSION AX027821.1 GI:10189665
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE
1 Bestetti, G., Cali, S., Orsini, G., Tonon, G., Zuffi, G. and Ghisotti, D.
Recombinant bacterial strains for the production of natural
nucleosides and modified analogues thereof
Patent: WO 0039307-A 13 06-JUL-2000;
BESTETTI GIUSEPPINA (IT); CALI SIMONA (IT); NORPHARMA SPA (IT);
ORSINI GAETANO (IT); TONON GIANCARLO (IT); ZUFFI GABRIELE (IT);
GHISOTTI DANIELA (IT)
FEATURES
Location/Qualifiers
1. 3128
/organism="synthetic construct"
/mol_type="unassigned DNA"
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/note="deod cloned downstream ptac promoter"

ORIGIN
Alignment Scores: 7.25e-111 Length: 3128
Pred. No.: 1222.00 Matches: 238
Score: 99.58% Conservative: 0
Percent Similarity: 99.58% Mismatches: 1
Best Local Similarity: 99.67% Indels: 0
Query Match: 99.67% Gaps: 0
DB: 6

US-10-035-300A-4 (1-239) x AX027821 (1-3128)
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QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 258 GGCAGCCGCTGCTGGCAAGTATATTCTGTAAGTATTCCTTGAAGATGCCCGTGAAGTG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
DB 318 AACAAAGTTCGCGTATGCTGGCTTACCGGTACTTACAAAGCGCCGCAAAATTTCCGTA 377
QY 61 MetGlyHisGlyMetGlyProSerCysSerIleTyrThrLysGluLeuThrAsp 80
DB 378 ATGGGTACCGGTATGGGTATCCGCTCTCCATCTACACCAAGAACTGATCCCGAT 437
QY 81 PheGlyValLysLysIleAlaAspPheAlaAlaGluPheGlyAlaLysValAsnAlaValAsp 100
DB 438 TTCCGCGTGAAGAAATTTATCCGCTGCTGCGGCTTCTGCGCGCAAGTTCTGCCGACGTAAA 497
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 498 CTGCGCGACGCTGTTATCGGTATGGTGGCTGCTGACCGATTCCAAAGTTAAACCGCATCGT 557
QY 121 PheLysAspHisAspPheAlaAlaAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 558 TTAAAGACCATGACTTTGCCGCTATCGCTGACATTCGACATGCTGCGTAAACGACGTAGAT 617
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
DB 618 GCAGCTAAAGCACTGGGTATTGATCGCTGGGTGATACCTTTCTCCGCTGACCTGTTTC 677
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 678 TACTCTCGGACGGCGAAATGTTCCAGCTGATGGAAATAATACGGCATTTCTCGCGCTGAA 737

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QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
Db 738 ATGAAGAGCGCTGGTATCTACGGCGTGGCTGCGAAGTTTGGCGGAAGCCCTGACCATC 797
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
Db 798 TGCACCGTATCTGACACATCCGCACTCAGAGCAGACCACTCCGCTGAGCGTCAGACT 857
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
Db 858 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGCGGATAAAGAG 914

RESULT 9
BD261814 3383 bp DNA linear PAT 17-JUL-2003
LOCUS Recombinant bacterial strains for the production of natural
DEFINITION nucleosides and modified analogues thereof.
ACCESSION BD261814
VERSION BD261814.1 GI:33071582
KEYWORDS JP 2002533126-A/3.
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1 (bases 1 to 3383)
AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
PATENT: JP 2002533126-A 3 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
PN JP 2002533126-A/3
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
Description of Artificial Sequence: Plasmid
CC Geod
FH Key Location/Qualifiers
FT gene (231)..(960).

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/organism="synthetic construct"
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Pred. No.: 8e-111 Length: 3383
Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0
DB: 6 Gaps: 0

US-10-035-300A-4 (1-239) x BD261814 (1-3383)

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QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
Db 300 GCGCACCCTGCGTGGCAAGTATATTCTGAACTTTCCTTGAAGTCCCGTGAAGTG 359
QY 41 AsnAsnValArgGlyMetIleuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
Db 360 AACACAGTTCGCGGTATCGTGGCTTACCGGTACTACAAAGCGCAAAATTCGCTA 419
QY 61 MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80

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Db 420 ATGGGTACCGGTATGGGTATCCGCTCTCTCCATCTACACCAAGAACTGATCACCGAT 479
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Db 480 TTGGGGGTGAAGAAATATCCGCGTGGGTTCCTGTGGCGCAGTTCTGCGCGACGTAAAA 539
QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
Db 540 CTGCGCGACGCTGTTATCGGTATGGGTGCTGCAACGATTCGAAAGTTAACCGCATCCGT 599
QY 121 PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
Db 600 TTTAAAGACCATGACTTTGCGCTATCGCTGACTTCGACATGCTGCGTAACGCGTAGAT 659
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
Db 660 GCAGCTTAAGCACTGGGTATTTGATCTCGGTGGTAACTGTTCTCCGCTGACCTGTTT 719
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
Db 720 TACTCTCGGACGGCGAAATGTTGACGTGATCGAAAAATACGGCATTTCTCGCGTGGAA 779
QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
Db 780 ATGGAAGCGGCTGGTATCTACGCGCTGCTGAGAAATTTGGCGCAAGCCCTGACCATC 839
QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrThrAlaAlaGluArgGlnThr 220
Db 840 TGCACGCTATCTGACCATCTCGCACTCAGAGCAGACCATGCGCTGAGCGTACAGACT 899
QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
Db 900 ACCTTCAACGACATGATCAAAATCGCACTGGAATCCGTTCTGCTGGCGGATAAAGAG 956

RESULT 10
AX027811 3383 bp DNA linear PAT 16-SEP-2000
LOCUS Sequence 3 from Patent WO0039307.
DEFINITION AX027811
ACCESSION AX027811
VERSION AX027811.1 GI:1018655
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
REFERENCE 1
AUTHORS Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
PATENT: WO 0039307-A 3 06-JUL-2000;
BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
GHISOTTI DANIELA (IT)
FEATURES
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/organism="synthetic construct"
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ORIGIN
Alignment Scores:
Pred. No.: 8e-111 Length: 3383
Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0
DB: 6 Gaps: 0

US-10-035-300A-4 (1-239) x AX027811 (1-3383)

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Db 240 ATGGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTGTATGCCA 299
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 Db 300 GCGCAGCCCGCTCGTGCAGAGTATATGCTGAAACTTTCCTTGAAGATGCCGTGAAGTG 359
 QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
 Db 360 AACACGTTTCGGCGTATGCTGGCGCTTCACCGGTACTTACAAAGCCGCAAAATTCGGTA 419
 QY 61 MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
 Db 420 ATGGGTACCGGTATGGGTATCGCTCTGCTCCATCTACACCAAGAACTGATCACCGAT 479
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 Db 480 TTCGGGTGAAGAAATTAATCCGCTGGGTCTCTGTGGCGCATTCGCGCAGTAATAA 539
 QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
 Db 540 CTGGCGACGCTGCTTATCGGTATGGGTGGCTGACCGATTCCAAAGTTAACCGCATCCGT 599
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 Db 600 TTAAAGACCATGACTTTGCGCTATCGCTGACTTCGACATGCTGCGTAACGCGATGAT 659
 QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
 Db 660 GCAGCTAAAGCACTGGGTATGTATGCTGGGTGGGTAACTGCTCTCCGCTGACCTGTC 719
 QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
 Db 720 TACTCTCCGACGCGGAAATGTTCCAGCTGATGGAATAATACGCAATCTCCGCGTGA 779
 QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
 Db 780 ATGGAAGCGGCTGATCTACGGCGTCTGCTGCAGAAATTTGGCGGAAAGCCCTGACCATC 839
 QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrAlaAlaGluArgGluThr 220
 Db 840 TGCACCGTATCTGACCACTCCGCACTCAGAGCAGACCACTGCGGTGAGCGTGCAGACT 899
 QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
 Db 900 ACCTTCAACGACATCAAAATCCGACTGGAATCCGTTCTGCTGGCGATAAAGAG 956
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 BD261825
 LOCUS 3934 bp DNA linear PAT 17-JUL-2003
 DEFINITION Recombinant bacterial strains for the production of natural
 nucleosides and modified analogues thereof.
 ACCESSION BD261825
 VERSION BD261825.1 GI:33071593
 KEYWORDS JP 2002533126-A/14.
 SOURCE synthetic construct
 ORGANISM artificial sequences.
 REFERENCE 1 (bases 1 to 3934)
 AUTHORS Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
 TITLE Recombinant bacterial strains for the production of natural
 nucleosides and modified analogues thereof
 JOURNAL Patent: JP 2002533126-A 14 08-OCT-2002;
 NORPHARMA SPA
 COMMENT OS Artificial Sequence
 PN JP 2002533126-A/14
 PD 08-OCT-2002
 PF 23-DEC-1999 JP 2000591198
 PR 23-DEC-1998 IT MI 98A002792
 PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
 ORSINI,
 PI GIANCARLO TONON, GABRIELE ZUFFI
 PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
 Description of Artificial Sequence: udp and deod cloned CC

downstream ptac
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 CC key
 PH key
 FT source
 FT source
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 1.3934
 /organism="synthetic construct"
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FEATURES

source
 Alignment Scores:
 Pred. No.: 9.69e-111 Length: 3934
 Score: 1222.00 Matches: 238
 Percent Similarity: 99.58% Conservative: 0
 Best Local Similarity: 99.58% Mismatches: 1
 Query Match: 99.67% Indels: 0
 DB: Gaps: 6
 US-10-035-300A-4 (1-239) x BD261825 (1-3934)

ORIGIN

QY 1 MetAlaThrProHisIleAsnAlaGluMetGlyAspPheAlaAspValValLeuMetPro 20
 Db 198 ATGGCTACCCACACATTAATGAGAAATGGCGATTTCGCTGACGTAGTTTGTATGCCA 257
 QY 21 GlyAspProLeuArgAlaLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
 Db 258 GCGCAGCCCGCTCGTGCAGAGTATATGCTGAAACTTTCCTTGAAGATGCCGTGAAGTG 317
 QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal 60
 Db 318 AACAACTTCGCGGTATGCTGGGCTTCACCGGTACTTACAAAGGCCCAAAATTCGGTA 377
 QY 61 MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp 80
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 Db 438 TTGGCGGTGAAGAAATTAATCCGCTGGTCTCTGTGGCGCAGTTCTGCGCAGTAAAA 497
 QY 101 LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
 Db 498 CTGGCGACGCTGCTATCGGTATGCTGCGTCCCTGCAACCGATTCCAAAGTTAACCGCATCCGT 557
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 Db 558 TTTAAAGACCATGACTTTGCGCTATCGCTGACTTCGACATGGTGGTAAACGCGATGAT 617
 QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe 160
 Db 618 GCAGCTAAAGCACTGGGTATGATGCTCGCGTGGTAACTGCTTCTCGCTGACCTGTTTC 677
 QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
 Db 678 TACTCTCGGACGCGGAAATGTTCCAGCTGATGAAATAATACGGCAATTCCTCGCGTGGAA 737
 QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
 Db 738 ATGGAAGCGGCTGTAICTACGGGTGCTGCAGAAATTTGGCGGAAAGCCCTGACCATC 797
 QY 201 CysThrValSerAspHisIleArgThrHisGluGlnThrAlaAlaGluArgGlnThr 220
 Db 798 TGCACCGTATCTGACCATCCGCACTCAGAGCAGACCACTGCGCTGAGCGTGCAGACT 857
 QY 221 ThrPheAsnAspMetIleLysIleAlaLeuGluSerValLeuLeuGlyAspLysGlu 239
 Db 858 ACCTTCAACGACATCAAAATCGCACTGGAATCCGTTCTGCTGGCGATAAAGAG 914
 RESULT 12
 AX027822
 LOCUS 3934 bp DNA linear PAT 16-SEP-2000


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DEFINITION Sequence 14 from Patent WO0039307.
ACCESSION AX027822
VERSION AX027822.1 GI:10188666
KEYWORDS
SOURCE synthetic construct
ORGANISM synthetic construct
REFERENCE artificial sequences.
1
AUTHORS Bestetti,G., Cali,S., Orsini,G., Tonon,G., Zuffi,G. and Ghisotti,D.
TITLE Recombinant bacterial strains for the production of natural
JOURNAL nucleosides and modified analogues thereof
BESTETTI GIUSEPPINA (IT) ; CALI SIMONA (IT) ; NORPHARMA SPA (IT) ;
ORSINI GAETANO (IT) ; TONON GIANCARLO (IT) ; ZUFFI GABRIELE (IT) ;
GHISOTTI DANIELA (IT)
FEATURES
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DB 258 GCGACCGCTGCGGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 317
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrThrLysGlyValGlySerVal 60
DB 318 AACACGTTGCGGATGATGCGGTTACCGGTACTTACAAAGCGCGAAATTTCCGTA 377
QY 61 MetGlyHisGlyMetGlyIleProSerCysSerIleThrLysGluLeuIleThrAsp 80
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QY 101 LeuArgAspValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg 120
DB 498 CTGCGCAGCTGCTTATCGGTATGGGTATGGGTATGGGTATGGGTATGGGTATGGGT 557
QY 121 PheLysAspHisAspPheAlaIleAlaAspPheAspMetValArgAsnAlaValAsp 140
DB 558 TTTAAAGACCATGACTTTGCGGTATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 617
QY 141 AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspPhe 160
DB 618 GCACCTAAGACCTGGGTATGATGCTCGCGTGGGTAACTTCTCCGCTGACCTGTTC 677
QY 161 TyrSerProAspGlyGluMetPheAspValMetGluLysTyrGlyIleLeuGlyValGlu 180
DB 678 TACTCTCGGACGCGGAATGTTGACGTGATGGAATAACGCGATTTCTCCGCTGACCT 737
QY 181 MetGluAlaAlaGlyIleTyrGlyValAlaAlaGluPheGlyAlaLysAlaLeuThrIle 200
DB 738 ATGAAGCGGTGTTATCTACGGGTGCTGCAGAAATTTGGCGGAAAGCCCTGACCATC 797

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LOCUS Recombinant bacterial strains for the production of natural
DEFINITION nucleosides and modified analogues thereof.
ACCESSION BD261816
VERSION JP 2002533126-A/5.
KEYWORDS synthetic construct
SOURCE synthetic construct
ORGANISM artificial sequences.
1 (bases 1 to 4189)
REFERENCE Bestetti,G., Cali,S., Ghisotti,D., Orsini,G., Tonon,G. and Zuffi,G.
AUTHORS Recombinant bacterial strains for the production of natural
TITLE nucleosides and modified analogues thereof
JOURNAL Patent: JP 2002533126-A 5 08-OCT-2002;
NORPHARMA SPA
COMMENT OS Artificial Sequence
PN JP 2002533126-A/5
PD 08-OCT-2002
PF 23-DEC-1999 JP 2000591198
PR 23-DEC-1998 IT MI 98A002792
PI GIUSEPPINA BESTETTI, SIMONA CALI, DANIELA GHISOTTI, GAETANO PI
ORSINI,
PI GIANCARLO TONON, GABRIELE ZUFFI
PC C12N15/09, C12N1/21, C12N9/10//C12P19/38, C12P19/40, C12N15/00 CC
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CC deoD
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ORIGIN
Alignment Scores:
Pred. No.: 1.05e-110 Length: 4189
Score: 1222.00 Matches: 238
Percent Similarity: 99.58% Conservative: 0
Best Local Similarity: 99.58% Mismatches: 1
Query Match: 99.67% Indels: 0
DB: 6 Gaps: 0
US-10-035-300A-4 (1-239) x BD261816 (1-4189)
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QY 21 GlyAspProLeuArgAlaIleLysTyrIleAlaGluThrPheLeuGluAspAlaArgGluVal 40
DB 1106 GCGACCGCTGCTGCGGAGTATATTGCTGAACATTTCTTGAAGATGCCCGTGAAGTG 1165
QY 41 AsnAsnValArgGlyMetLeuGlyPheThrGlyThrThrLysGlyArgLysIleSerVal 60
DB 1166 AACAACTTCGCGGTATGCTGGGCTTCACCGGTACTTACAAAGCGCGCAAAATTTCCGTA 1225
QY 61 MetGlyHisGlyMetGlyIleProSerCysSerIleThrLysGluLeuLeuThrAsp 80
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QY	41	AsnAsnValArgGlyMetLeuGlyPheThrGlyThrTyrLysGlyArgLysIleSerVal	60
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QY	61	MetGlyHisGlyMetGlyIleProSerCysSerIleTyrThrLysGluLeuIleThrAsp	80
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QY	101	LeuArgAspValValIleGlyMetGlyAlaCysThrAspSerLysValAsnArgIleArg	120
Db	713	CTGGCGACGTCGTATTCCGGTATGGGTGCCCTGCACCCGATTCCAAAGTTAAACCGCATCCGT	772
QY	121	PheLysAspHisAspPheAlaAlaIleAlaAspPheAspMetValArgAsnAlaValAsp	140
Db	773	TTTAAAGACCATGACTTTGCCGCTATCGCTGACTTCGACATGGTGGTAAACGCACTAGAT	832
QY	141	AlaAlaLysAlaLeuGlyIleAspAlaArgValGlyAsnLeuPheSerValAspLeuPhe	160
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Search completed: June 8, 2004, 04:50:43
Job time : 2824 secs

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